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## **Statistics of Tokugawa Coastal Trade and Bakumatsu and Early Meiji Foreign Trade, Part 2: Trade in Bakumatsu and Early Meiji Times**

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Evaluation of archival sources on Japanese trade in the bakumatsu period (1853–1867) and in the first fifteen years of the Meiji period is the primary purpose of this two-part essay, of which Part 1 appeared in *Japan Review*, 21 (2009). After the opening of the ports in 1859, statistics were directly compiled by bakufu officials from traders' invoices. Previously, officials had relied on data furnished by wholesalers (*tonya*) and guilds for coastal trade. The notional parity of a gold yen and a silver yen in the closed gold standard put in place in 1871 broke down in the open market for the Mexican dollar, the accepted unit of account for foreign trade in the newly opened ports. It was only as gold disappeared and Japan's currency system became *de facto* a silver one that a conversion emerged in national accounts of totals from dollars (or silver yen) into gold yen at close to a one-for-one rate. Arguably, Japanese officials coped well in the early Meiji years with the challenge of creating Western style statistics, even if variant grand totals emerged in the conversion of dollar figures into gold yen in the uncertain monetary conditions. Archival information on coastal trade in earlier Tokugawa times rested on copies. Those copies are few and remote from the originals. This is true also for the new foreign trade of the 1860s. Even under central direction from 1869, only a few copies, mostly drafts rather than final versions, are known for the new aggregates (from 1869, in gold ryō; from 1871, in gold yen). The basic dollar totals forwarded regularly from individual Custom Houses to the central authorities, the key raw material for converting dollar grand totals into gold yen until the 1880s, are known almost exclusively from figures in the British Parliamentary Papers.

**Keywords:** OSAKA, EDO, RICE TRADE, *BUGYŌSHO*, *TONYA*, ARCHIVAL SOURCES, MINISTRY OF FINANCE, CONSULATE, CUSTOM HOUSE, MEXICAN DOLLAR, GOLD, SILVER, YEN, BRITISH PARLIAMENTARY PAPERS (BPP)

## 1. Learning the Art of Foreign Trade Statistics

If Japanese officials in the bakumatsu years had wished to maintain their trade accounts in the old style without being importuned by others to change, it would have been impossible to do so. Coming from societies already accustomed to the collection and use of copious statistics, representatives of Western nations sought to document Japan in statistical terms. Japanese officials found themselves badgered not only by consular officials but also by foreign merchants. The first foreign Chamber of Commerce was constituted in Nagasaki 長崎 in June 1861, and prominent among its objectives was the aim “to compile and publish a statement of trade, and otherwise assist to make the resources of the country generally known.” Chambers of Commerce were formed in other open ports, as well, and sought information from the Japanese officials, duplicating to some extent what Western consular officials were doing. Customs management lacked a precise institutional identity in the early years of open ports. After the Dutch-Japanese treaty of 1857, the *kaisho* 会所, which had handled foreign trade in Nagasaki, at first exercised this role, but lost its managerial function in controlling Western trade. Western diplomats from the outset referred to the Japanese office where customs matters were administered as the “custom house,” a usage that implied a highly specialized office manned by career specialists, close to the water’s edge. The first term used in Japanese to denote “custom house” was *unjōsho* 運上所, which by decree of the Finance Ministry (Ōkurashō 大蔵省) in 1872 (11<sup>th</sup> month) became *zeikan* 税関. In Nagasaki in 1863, the former *kaisho* was restyled *unjōsho*, and a decade later the designation duly became *zeikan*. At the outset of the Meiji era, the *unjōsho* were responsible to the Foreign Affairs Agency, which in 1869 finally became the Foreign Ministry (Gaimushō 外務省). Foreign Ministry reporting of foreign trade was surrendered in 1871 to the Ministry of Finance.

Rutherford Alcock, who arrived in Japan in 1858 as the first consul general of Great Britain, complained in March 1860 that the want of a system, combined with the desire of individual merchants for secrecy, rendered it impossible for foreign representatives to get details of trade.<sup>1</sup> He had noted in the preceding November that the Japanese themselves admitted that they lacked both a system and knowledge of how to transact business.<sup>2</sup> Many Western consular officials were like Alcock in having a background in China, where foreigners ran the customs departments in the ports, and they had little sympathy for the Japanese or understanding of their predicament. A passing post 1868 reference to the contrasting circumstances in Japan and China hints at a British lack of confidence in statistical collection that was not managed by Europeans. This lack of confidence was most explicit in the comments at Hyōgo/Osaka 兵庫/大阪 by Gower, the official most hostile in those years to Japanese management. He maintained in 1872 that the defects in the statistics were “likely to be repeated in future unless the Japanese government adopt, for a few years at least, a foreign inspectorate to protect their commercial revenues, as well as the interests of honest merchants.”<sup>3</sup> The judgments of men who had minimal background in Japanese affairs at the time of their appointments tended to be unduly harsh. The British made no allowance for the fact that Japanese officers were making the adjustment from a situation in which no taxes had been levied on the transit of goods to one in which taxes were collected; and from an informal statistical framework which was a passive and intermittent collation of data, provided by wholesalers or *tonya* 問屋 with little central guidance, to one in which these officers of the bakufu were creating statistical compilations from raw returns, of which they were for the first time the originating collectors. For the Japanese, the problem was in part one of imposing a new statistical discipline on officials who had been trained in the old

school of administration. Outside Nagasaki, it was rather a case of creating functionaries with no previous experience of foreign trade in any fashion. In the first decade of open ports, the accounting operation was an appendage of the office of *bugyō* 奉行 (magistrate), and each office was independent of scrutiny or direction from the center for its routine working. In the 1860s, less than wholehearted cooperation is to be explained more by reluctance to yield to unwelcome and pushy foreigners than by opposition to new work routines. Though consuls quite quickly got access to the books, they were initially unsuccessful in getting access to statistics of total trade, whether compiled Japanese style on a monthly basis or added up at year's end.

Nagasaki presented the problems more acutely than Kanagawa 神奈川. As late as November 1860, a British representative complained that details of trade could not be obtained at the Custom House "owing to the want of method, dilatoriness and procrastination of those officials."<sup>4</sup> In 1859–1860, when Custom House officials withheld statistical estimates from consular staff, foreign diplomats attempted to make sense of the actual registers of "applications" for permits, which Japanese officials reluctantly allowed them to consult. The report of the consul at Kanagawa for the second half of the year 1859 was based on examination of such Custom House records, and on what he described as "books kept at this office."<sup>5</sup> British officials sent clerks to the Custom House to copy out particulars from permits, or they paid a customs official a monthly fee to supply them with the details.<sup>6</sup> They remarked that the "applications," a vital source of trade detail filed by merchants in order to acquire the permits authorizing exports or imports of goods ("entries" in Western customs jargon), were readily accepted at the Custom House, even if carelessly filled in.

Given access to some details of Custom House paperwork but unable to obtain overall figures of trade, consular officials balked at attempting an independent assembling of the data and calculation of grand totals. For Nagasaki, the crude calculations for the latter half of 1859 were based on figures from Shanghai, through which most of Nagasaki's trade was routed.<sup>7</sup> For 1860, the Nagasaki return was again based on figures of imports from Japan recorded at the Shanghai Custom House, plus an estimate of exports from Nagasaki to Hong Kong and England, which were valued at 463,760 dollars, and converted into sterling at 5s.0d. to the dollar.<sup>8</sup> In early 1860, Alcock recorded his belief that the trade of the three open ports for the first six months after opening amounted to £1 million sterling.<sup>9</sup> Figures quoted for Kanagawa for the second half of 1859 in a report of 26 April 1860 were based partly on the Shanghai port books.<sup>10</sup> In the course of 1860, British officials at Kanagawa were still without regular access to Japanese Custom House counts; they recorded detail month after month, but did not express clear-cut totals for accounting periods, whether monthly or longer.<sup>11</sup>

The low opinion held by British officials of the work of the Custom Houses was greatly colored by their access to the applications for permits to export or import. They do not seem to have been aware that grand totals of trade were being withheld from them, and hence they saw things simply in terms of a lack of systems. In retrospect, we might judge that the details of their registers could be faulted, but Japanese Custom House officials in the first years of open ports probably executed their work more fully and more rapidly than frustrated British representatives ever realized.<sup>12</sup>

Only the faintest traces of the early work of Custom House officials now exist. The only thorough study of the pre 1868 sources is that by Ishii in 1944.<sup>13</sup> He was familiar with British Parliamentary Paper figures, and with M. B. T Paske-Smith's published work.<sup>14</sup> He also

gathered sparse Japanese data, and exercised a real critical faculty in attempting to resolve the contradictions in much of his data. The dismissive comment by Sugiyama Shinya 杉山伸也 that “for the period 1859–67 Ishii Takashi 石井孝 has given his own estimates, but his figures seem to have been put together in a random fashion from different sources which he considers appropriate rather than according to a coherent system” is not only unfair but inaccurate.<sup>15</sup> The comment entirely ignores the scarcity and heterogeneity of data, and the problems posed thereby. It is also not the view of others. Baba and Tatemoto regarded Ishii’s as the most reliable examination of the figures.<sup>16</sup> Ishii had quite carefully worked out his figures, first constructing a table for the years 1859–1867, albeit with some gaps, based on a short note published in 1895 by Kawai Toshiyasu 河合利安.<sup>17</sup> Kawai’s tables are a one page communication, and do not warrant comment, except that his tables are an indication that BPP papers were becoming more widely known in Japan in the 1880s and 1890s.<sup>18</sup> Ishii then put together a second table presenting figures compiled by Paske-Smith in the 1920s from sources that he described as “obtained at the Custom House by H. B. M. Consuls.” These are from the archives of one or more British consular or diplomatic offices in Japan. A third table, confined to Yokohama data for 1859–1867, was originally published under the auspices of the Yokohama Chamber of Commerce and Industry (Yokohama Shōgyō Kaigisho 横浜商業会議所) without any indication of its origins.<sup>19</sup> To avoid any confusion, it should be noted at this point that, though the foreign trade was conducted almost from the outset at Yokohama, the British consulate at first remained at Kanagawa, the original site envisaged for foreign trade. It continued moreover to be designated by the British as the Kanagawa consulate long after it had moved to Yokohama itself.

Kawai Toshiyasu stated in his article that he drew figures from consular reports to the British Foreign Office. Not content to accept all of Kawai’s numbers, Ishii supplemented those with data from other sources for years in which grand totals were lacking in the BPP, and for years in which there were variants for ports. The BPP figures were themselves becoming known in Japan by the 1880s. Serial data for all three open ports for the years 1860–1867, with a few gaps, were printed in the fourth issue of *Kokka gakkai zasshi* 國家學會雜誌 (15 June 1887), and although no source was identified, the data were quite clearly drawn from British consular reports.<sup>20</sup> In transcription, errors inevitably slipped in. There are three deficiencies or errors in *Kokka gakkai zasshi* data, two for 1863 and one for 1865. Paske-Smith himself made a mistake for 1865, giving a slightly rounded figure of 1,560,800 dollars when, in fact, the number should read 560,788.<sup>21</sup> The points we should not miss are these: Ishii’s figures vary on occasion from figures in Kawai, BPP, and Paske-Smith, and some of the figures of Paske-Smith differ from those in the BPP.<sup>22</sup> The most disconcerting challenge facing Ishii, perhaps, was that the BPP give a range of figures, not a single figure, for Yokohama in the year 1863. He opted for the high totals of 10,554,012 dollars for exports, twice the amount of a variant figure in BPP and of the figure given by Paske-Smith.<sup>23</sup> He also opted for 3,244,584 dollars for imports, disregarding without discussion a higher figure for imports of 3,474,749 dollars that appeared in Table 3 of his own volume.<sup>24</sup> He left aside the very high exports total of 13,749,985 dollars that Kawai had offered; how that total was arrived at is unknown. However, it is likely that there was an error of transcription in which a “1” was erroneously inserted in front of a figure of 3,749,985 (fairly close to 3,704,484, the figure in Ishii’s Table 3), thus inflating the total to 13,749,985. The results of Ishii’s work in his Table 5 are the best available for the subject.<sup>25</sup> With the exception of the year 1863, export figures from 1862 onwards tend to accord in all sources, and not just

in Paske-Smith. The real divergence is in imports. There are marked differences in the figures for Nagasaki and Yokohama in the table in the modern *Yokohama shi shi* 横浜市史.<sup>26</sup> Imports to Yokohama in 1860–1862 as recorded in *Yokohama kaikō 50 nen shi* 横浜開港五十年史 are even higher.<sup>27</sup>

The timing of consular access to grand totals of trade can be dated roughly for Kanagawa. In or before March 1861, Consul Howard Vyse had access to “declared” figures for 1860 (that is, the values declared at the Custom House and entered in its statistical record).<sup>28</sup> In Nagasaki, the problem of access lingered on. Though figures for 1860 and 1861 later became known to the officials there, the absence of figures for 1861 suggests that a breakthrough in official communications did not occur until 1863. Finally, the BPP report for the year 1862 gives Nagasaki numbers denominated in taels, a money of account used by officials in Nagasaki. According to the BPP report, the figures were of Japanese origin and they had come quickly into the hands of consular officials.<sup>29</sup> Alcock showed in his book, *The Capital of the Tycoon: a Narrative of Three Years Residence in Japan* published in 1863, how things had improved. With figures in his possession either when he left Japan in March 1862 or coming into his hand afterwards, he was able to give figures for Nagasaki in 1861 “according to the returns made up on the spot” (i.e., from the Custom House) and for Yokohama in 1860 and 1861.<sup>30</sup>

For 1859, Ishii used what he identified very baldly as *bugyōsho* records (*bugyōsho no kiroku* 奉行所の記録) for Nagasaki,<sup>31</sup> and he also quoted a contemporary Japanese source for Hakodate 箱館.<sup>32</sup> For the years 1860 and 1861, he was able to draw on two Japanese sources for Hakodate.<sup>33</sup> For 1863, he quoted an export figure of 5,116,634 dollars for Yokohama from a Japanese source, slightly less than the better known BPP figure of 5,134,185 dollars.<sup>34</sup> The fact that Japanese totals were becoming accessible in the early 1860s is also suggested by the evidence which Paske-Smith cited six decades later. Drawing on what appear to be older consular sources in Japan, he was able to give rounded figures for Nagasaki in 1859 and 1860, and for Yokohama in 1860. It seems probable that these figures came into consular possession as British relations with the Custom Houses improved, although too late to feature in reports filed by Alcock and his contemporaries in the early 1860s.<sup>35</sup>

The regularizing of information sharing by Custom Houses with consulates can be traced easily enough. Whatever the vagaries of access in the case of Nagasaki figures for 1859–1861, figures for 1862 were received and reported promptly. The consul’s problems in converting the 1862 totals from taels and the fact that figures for 1862 are missing from Paske-Smith’s source hint, however, at the confused situation of the time. This obviously continued the following year, as the report for 1863 was submitted only on 3 January 1865, and in response to a formal request from the legation in Edo. The tenor of the report implies that the data were already in the consulate. A consul, who was new to Nagasaki, commented that he was not “able to form a correct idea of the real value of trade during that year [1863], which the enclosed returns only represent in part,” giving the impression that he had failed to take any action on the return which was already in the office.<sup>36</sup> In contrast to the situation in Nagasaki, information for Kanagawa (Yokohama) was provided in a timely manner. The consular report of 31 January 1863 gave figures for 1862 and retrospectively quoted the data for both 1860 and 1861, showing how the communication of statistical totals from Custom House to consular station had been established on a firm basis at Kanagawa.<sup>37</sup> Prompt provision of data to the British was repeated a year later for the 1863 figures.<sup>38</sup>

In Nagasaki, it looks as if the problems resided wholly or in part in the consulate. The

confusion over currency and the incomplete coverage of the data in the return for 1862 and the fact that the report for 1863 was not received in Edo until 1865 suggest as much.<sup>39</sup> The transition to regular reporting was achieved in Nagasaki only in January 1865 when the 1864 report was conveyed to British officials. By contrast, the change for the better was signaled in Yokohama from the time of the report for 1862.

Hakodate reports began to become regular from the time of return of data for 1864. While a return for 1861 for Hakodate appears in BPP early in 1862, the return for the port for the year 1862 is simply a list of imports and exports without a grand total.<sup>40</sup> Later, the report of 19 February 1864, which provided the 1863 figures, also added up the export figures for 1862.<sup>41</sup> Finally, the 1863 figures in their prompt receipt (on 1 January 1864!) which were followed later by punctual data for 1864 and 1865 set the pattern of future smooth statistical reporting.<sup>42</sup> Consular contact was primarily with the Custom House officials. It is less clear how much officials had to call on the *bugyō* in person for intervention in the early years. *Bugyō* goodwill was certainly forthcoming after mid decade. This can be seen in the trouble taken by the *bugyō* of Osaka, not yet a port, to provide up to date population census figures and also remarkable details of the port's coastal trade for 1866 (See Appendix 2). These 1866 data, the sole data for several decades on the port's general import trade, seem to contradict the widespread assumption of a bakumatsu breakdown in bureaucratic standards.<sup>43</sup> They also serve to underline that, while Western style statistics demanded an entirely new approach, there existed enough of a working statistical awareness to facilitate a response to new challenges.

From the time of receipt of the Nagasaki data for 1864, aggregated totals for all the ports could be compiled. They were incorporated into the first general British consular survey of trade, for the year 1869, which appeared in a report dated 1 March 1870.<sup>44</sup> In Nagasaki, returns in taels were the norm in the early 1860s and returns in ichibus in the mid 1860s, but thereafter returns for all three open ports were in dollars. Even after 1873, when good official Japanese reports began to appear, British reports continued to be based primarily on the returns to the legation from individual consular stations. The reason for this was essentially the hybrid nature of Japanese currency. The Japanese central returns of trade converted dollars into gold yen, in keeping with the bookkeeping requirements of the nominal national yen gold standard of 1871. However, as the dollar remained the accepted unit of account of the ports (apart from a few early years in Nagasaki), the British returns were simply observing the commercial reality for Japanese officials; the dollar was the currency in which the accounts given by the Custom Houses to consular officers were denominated. Although a majority of transactions was conducted in local currencies, the aggregation of taxes and of gross totals of trade was presented in dollars alone. Before 1868, no national trade totals (that is, aggregation of all returns from the ports) contemporary with the year of account exist; this suggests that gross national aggregation came into existence only with the emergence in 1869 of the ryō and, later, the gold yen.

A characteristic of the 1860s is the existence of variant figures. Variants in BPP figures for Hakodate in several early years or in the BPP figures for Nagasaki for 1864 can be regarded as reflections of imperfections or confusion in the early stages of regular reporting, but it is harder to explain why they exist also in some of the figures of the second half of the 1860s.<sup>45</sup> A few of these variations are of substantial proportions. Export figures in Paske-Smith and *Yokohama shi shi* are identical for 1866 at 14,100,000 dollars, but they give different import figures: 11,430,000 in Paske-Smith and 11,735,000 in *Yokohama shi shi*.<sup>46</sup> For 1867, exports

and imports in BPP are larger than figures in both *Yokohama shi shi* and Paske-Smith.<sup>47</sup> In both pre and post Restoration sources, different gross totals may reflect one or more of several facts: they may have been drawn from incomplete original, or intermediate, workings of figures; they may or may not include bullion movements or coastal trade to or from open ports; and errors of transcription may have occurred. The preface to the first modern monthly reports in 1873 noted that the details of earlier statistics had not been “carefully prepared.”<sup>48</sup> The only sure fact is that variations exist; beyond that, one enters the realm of speculation. The published consular reports provide the best guide. They are the sole series containing the original dollar denominations trade declared by the Custom Houses. This feature distinguishes them from records compiled using later official conversions from dollars into gold yen in Tokyo. It seems prudent to adopt the view of the *Yokohama shi shi* volume on early trade statistics: the figures in the BPP are to be preferred not only for the early years, but for the entire period up to 1884.<sup>49</sup>

However, the two most substantial cases of contradiction in the early 1860s prove on closer examination of the sources to be superficial. In the Nagasaki figures for 1863, the problem was confusion in converting from taels to dollars, a confusion that had already existed for the 1862 figures (see Appendix 3, A). In the case of the Yokohama figures for 1863, the confusion arose solely from a badly structured report (see Appendix 3.B). Dollar totals in the main text of the consular report on that year are the “declared values” at the Custom House, but the sterling totals are not conversions of the declared values; they are conversions into sterling based on higher gross dollar totals that had been created in consular calculations set out solely in the appendix to the consular report. The figures were dramatically inflated by a consular revaluation of the price of silk. The consular calculating operation was not made clear in the report, where the figures appear to be sterling equivalents of the declared values. In other words, there is neither a serious error in the figures, nor a gross confusion by the consul, but a contradiction, apparent rather than real, caused by the lack of an unambiguous statement drawing attention to the different basis of the figures in the appendix.<sup>50</sup> In a paradoxical way, these artificial divergences in the returns for Nagasaki and Yokohama actually validate the basic soundness of the figures. As they got access to more figures, British representatives in Japan became more critical, and their complaints became more substantive. In essence, their criticism was three fold. The first point related to permits accepted by Custom Houses and the accuracy of the quantities stated on them. My own judgment of this type of complaint is that, while defects could indeed be detected, consuls exaggerated the extent to which the returns were defective. The second criticism was that Custom Houses too readily accepted declarations by merchants containing undervalued prices. British observers often noted undervaluation of prices in the Custom House as a failure of the statistics. The consequences of revision could be dramatic, as in 1863 in Yokohama, where silk was the dominant export, and the understated price was revised by the British in their return of trade for the year. Sugiyama asserts that all goods were undervalued, and that imports were undervalued more than exports.<sup>51</sup> This weakness did exist, in my view, but it was not a fundamental statistical problem, as some modern writing has argued. There are modern commentators who failed to make a clear distinction between routine underestimations in entries declared at the Custom House (inevitable in an *ad valorem* system), and a more technical issue relating to conversion problems when gold currency was converted at a fixed and artificially high value on silver set by government fiat to be observed by Custom House officers in converting prices in gold into prices in silver. This latter point constitutes the third criticism that occurs in the contemporary consular comment, and it is echoed in the



modern literature. There was never a problem in invoices for exports which were declared in silver, the currency of the ports, nor for imports coming from silver currency countries, where any conversion was a straightforward operation between two currencies backed by silver. It arose only for imports from gold currency areas. In that case, the problem arose not for reasons of exchange, as market rates of exchange were well established and known in the ports, but because Japanese officials were tied to converting invoices in gold currencies at a fixed rate. For purposes of conversion of invoice prices in gold currencies, the Custom Houses adhered to a valuation of 5.90 taels per silver dollar, the rate that existed at the time of opening of the ports.<sup>52</sup> Although this rate remained fixed in the Custom House calculations, by 1863 the open market exchange rate had shifted to 3.37 taels to the dollar. Expressed in different terms, the amount of sterling (a gold currency) that could be acquired with one silver dollar on the open market fell from between 5s.0d. and 5s.6d. to 4s.6d. In the market, then, but not in Japanese Custom House accounting, the value of silver currency had declined against that of gold currency. While aggregates for imports from silver currency areas were realistic, since they reflected market rates, total imports were deflated by understated figures for goods from countries with gold-based currencies. If gold was undervalued against silver in the exchange rate, conversion from gold to silver by a simple process of arithmetic automatically deflated the total value. The situation may be illustrated by a simple hypothetical example of an invoice for £1000 sterling, official exchange rate of 7s.6d. sterling to the dollar, and current market rate of 5s.0d. Conversion at the official rate would yield a dollar total of merely 2,664 dollars, while conversion at the market rate, used by merchants in their private accounting, would amount to 4,000 dollars. The problem in the early 1860s was a temporary one, and it was protracted by Alcock's reluctance to agree to change, as the rate was advantageous to foreign traders in settling accounts at the Custom House.<sup>53</sup> The Tokugawa authorities in 1865 accepted a proposal from foreign countries that gold prices of imports should be converted at real exchange rates, with the result that overvaluation did not occur in the statistics of 1865 and 1866.<sup>54</sup>

## 2. Improvements in Statistics from the Mid 1860s

British representatives may have had doubts about the quality of the registers of permits or of the figures, but they conceded at a very early stage that progress had been made as far as access to data was concerned. Already in 1863, a new British official, Winchester, implied in an otherwise censorious report on Nagasaki that ready access to the records was at last now established.<sup>55</sup> The report for Hakodate for the same year found Japanese officials obliging, although two years later the British were alleging that the methods of the Hakodate Custom House were irregular.<sup>56</sup> Starting with the reports for the year 1865 (submitted in early 1866), consuls were able to forward annual returns of trade for the open ports to the British legation in Edo with very little delay. Indeed, reports from consular stations with figures for the preceding year were often dated 1 January of the following year. This rapidity, astonishing by European standards, was made possible by the fact that, repeating the pattern of Tokugawa times, monthly summaries were circulated to interested parties or, if not circulated, at least accessible. To arrive at a cumulative total for the year, Japanese officials had only to add figures for the final month of the year to the total for the previous months, which was already known. Consular officials seem to have relied on the annual figures from the Custom Houses, and either not to have received the monthly returns or to have ignored them. In observing in the spring of 1873 that the annual Kanagawa total for 1872 had been made from the aggregation of the monthly totals

received at the consular station, the consul seems to have been noting the fact as exceptional.<sup>57</sup>

A swift aggregation of figures within Custom Houses suggests an absence on the part of Japanese officials of any process of revision or checking. The existence and retention of monthly figures would seem to account for the fact that, despite the loss of the records of the Custom House at Yokohama (Kanagawa) in late 1866, returns existed for much of the year. In applying to the Yokohama *bugyō* for “the usual Custom House returns” in early 1867, the Kanagawa consul was informed that they had been destroyed in a fire the previous November. The same fire had destroyed the records of the Chamber of Commerce, and no return was possible for 1866.<sup>58</sup> In contrast to Japanese officials who possessed information for the preceding months, the Chamber of Commerce and consulate seemed totally bereft of figures. The consular station was unable to provide figures for 1866 to the legation in Edo, but after combing through the consular archives more than sixty years later, Paske-Smith was able to cite figures (presumably for the first ten months of 1866). This suggests that monthly returns had been received, but ignored at the time. In May 1868, a British consular officer took the liberty to pen an unprecedented adverse comment on the Kanagawa statistics. Writing up the report for the year 1867, having had to use the 1865 figures as a reference point in the absence of figures for 1866, he remarked contemptuously:

Although the desire always has been to accept the returns of the Custom House, such as they were, it was found impossible to do so for 1865, those furnished being found, after having been made up, so much below any reasonable estimate that they had to be thrown aside as worthless, and information sought in other directions.<sup>59</sup>

Turnover of consular personnel may be relevant. Myburgh, who wrote the report on 1865, had taken up duty only on 4 January 1866, and may not have had sufficient time to make himself conversant with the figures; at any rate, he said little. Fletcher, the author of the hostile critique of the 1865 figures, was also a new man, and he supplemented his adverse comments with the self-justifying remark that “it is only lately that returns came into my hands and afterwards they had to be arranged into some sort of system.” Neither man appears to have had easy familiarity with, let alone mastery of, the figures that they commented on. The absence of any partial figure for 1866 shows that the consul was unaware of the existence of monthly returns, and suggests little statistical engagement with the Custom House officials. In applying to the Custom House for a return for 1866—thereby exposing an attitude of passive reliance on Japanese officers that would have been unnecessary for a consul who kept in regular contact—the British representative was unaware that the November 1866 fire had destroyed all the records of the Custom House.

Her Britannic Majesty’s consular officers’ expressions of discontent raise as many questions about the officers themselves as about the Japanese in these years. Criticism by British officials was directed primarily towards the process of handling the permits (which incorporated the detail from merchants’ formal applications for them, and hence sanctioned the movement of goods), whether in terms of valuation of goods or deficiencies in the quantities recorded. It was claimed that the Nagasaki Custom House returns for 1862 recorded exports of 554 piculs of silk, whereas an account maintained by “mercantile agencies” reported 967 piculs.<sup>60</sup> As for prices, teas were regarded as undervalued in the Nagasaki returns, and British consular reports made upward adjustments to arrive at higher figures. Over-ready acceptance by the customs officials of the entries submitted at the Custom House by merchants was set out at length by Winchester at Nagasaki in his report on 1862.<sup>61</sup> As duties were on an *ad valorem*

base, there was a real incentive for undervaluing the amounts, and the British believed local merchants were taking advantage of the innocence or inexperience of the Japanese officials. This was particularly the case for imports, with which many of the Custom House officers were unfamiliar; undervaluations for exports were less marked. Undervaluation was of course never to go away entirely in a system in which goods were taxed *ad valorem*. By 1880, the view was that both imports and exports were undervalued though this was by now a minor issue. Exports tended to include prime cost only and shippers tended not to add in the extra cost incurred between purchase and shipment (that is, prices in practice were not on an f.o.b. (free on board) basis, and hence including all costs up to that point).<sup>62</sup> Whatever the deficiencies in Japanese figures, however, it is worth noting that the criticism is based on a newfound sophistication, which was emerging even in Britain only in and after the 1850s. In a longer time perspective, it is not productive to damn the figures; that merely hinders our progress toward understanding the economic phenomena of which they are indicators.

As remarked earlier, modern writers have been confused by a distinction, unrealistic in statistical terms, made by nineteenth century British officials between the Custom House statistics of imports and calculations made primarily by the Chambers of Commerce (but widely quoted by consular offices) of what they described as the “disposal” or sale of the goods. Few contemporary consular and trade officials were troubled by the confusion that has afflicted some historians and commentators. The estimates of disposals rested on official Japanese data of individual commodities adjusted by intelligence—perhaps not uniformly of high quality—supplied by consular officials, individual merchants and, above all, the chambers of commerce. The distinction was between customs figures, seen as a record of goods landed and warehoused, and returns emanating from the Chambers of Commerce and intended to record the “disposals” by importers to buyers. Disposals consisted of sales for the year, based on imports, adjusted by change in inventory on hand during the same period. As late as 1882, Sir Harry Parkes, the British minister who was a driving force behind the statistical work of his officials, described the customs figures as “a record of importation and not of consumption.”<sup>63</sup> This ignores the fact that the Custom House figures measured in concrete terms the transfer of goods between countries, whereas the consular and Chamber of Commerce officials in the open ports put their energies into a bookkeeping exercise of their own devising that was susceptible to subjective manipulation of Custom House data. We can either take on trust their confidence in the merit of the estimates they produced, or we can have doubts. There are reasons for doubting the adequacy of the information from trader associations, and there is no evidence of British consular staff, at least, sharing statistical information with foreigners other than the Americans.

It has been suggested that the statistics first reported as consular figures owed as much to the Chambers of Commerce as to the consuls. Sugiyama has expressed the sweeping view that “the method of compilation is not clear.”<sup>64</sup> However, the methods of compilation are not in doubt. The Chambers of Commerce and consular officials alike relied on the primary data from the Custom Houses, and for some of their observations they drew on trade information collected by individual merchants. Upon gaining access to the Custom House records, chamber officials or consular officials sometimes simply re-aggregated the quantities for individual commodities, and also adjusted prices. These data rarely included gross figures for trade. In Osaka, which became an open port in 1868, a decade later than the other ports, the concept of “disposals” was more persistently pursued than in other ports.<sup>65</sup> Estimates of disposals were turned into figures intended to represent total disposals for the year. To a lesser extent, data

for exports also were adjusted, using criteria of foreigners' specification, to yield annual totals. However, even in the case of Osaka, a careful reading of the annual consular reports makes clear the different basis of these calculations, and the situation was well understood by most of those involved. As discussion in the main body of annual reports shows, the principal value of disposal figures was to convey estimates of actual sales of individual commodities within a twelve month period, and the reader was referred to the appendices for tables from the Custom House. Where the current year was compared with preceding years, or where retrospective tables were given, the totals were invariably the figures provided by the Custom Houses. Put baldly, the Chamber of Commerce data are by no means statistics in the proper sense of the word. Even in Hyōgo/Osaka in the 1870s, where the emphasis on disposals was particularly strong, composite aggregates of imports were intended to be simply estimates of disposals, not substitutes for the official figures themselves. From 1873 onwards, the reader of British reports was referred for guidance on the overall trade of Hyōgo/Osaka to the statistics appended to the reports drawn from printed returns from the Custom House.<sup>66</sup> A not unimportant reason for calculations by Chambers of Commerce was that the Custom House did not distinguish in its published totals between the various countries until the 1880s. Before that decade, the distinction was between vessels in terms of the flags of different nations, but this was not helpful, as vessels very often carried the goods of other nations.<sup>67</sup>

### 3. Early Meiji Statistics

What happened in the immediate wake of the Meiji Restoration in terms of central direction of trade accounting is obscure. Modern accounts in Japanese simply refer to the role of "the competent authorities" (*kantoku kanchō* 監督官庁).<sup>68</sup> By 1872, the Ministry of Finance had established full blown supervision, but the stages by which that supervision developed are not clear. There is no suggestion that central control had already emerged in 1868. The first steps in centralized management occurred as early as 1869 and 1870, when the Foreign Ministry seems to have compiled overall figures for the ports. The first return by the Ministry of Finance was for 1871.<sup>69</sup> Comments by consuls, particularly on the quality of the completed permit forms, began to become more positive. As early as 1870, Consul Lowder observed in his report on Kanagawa trade in 1869 that "a marked improvement is observable . . . [T]hese returns may, therefore, be looked upon as more correct than those which have hitherto been supplied to this consulate."<sup>70</sup> Consular comment on the year 1871 at Kanagawa recognized the "improved administration" afforded by "the governor and superintendent of Customs."<sup>71</sup> The report on the year 1872 conceded a close correspondence between Custom House figures and Chamber of Commerce calculations in the case of exports of "exceptional prominence," and no "great discrepancy" in the Customs figures for imports.<sup>72</sup> New forms issued from the customs were coming into evidence in 1872, and officers in the ports were now under a compulsion to observe instructions from Tokyo.<sup>73</sup> The first bilingual reports from January 1873 were from the "Imperial Customs, Yokohama."<sup>74</sup> In the preface to monthly reports for the following year, the head of the office is identified as Matsukata Masayoshi 松方正義, Commissioner of Internal Revenue, at the Ministry of Finance.<sup>75</sup> Reference is also made in 1874 to a Statistics Division, which implies that statistical work had now become a specialized office within the Ministry of Finance.

In 1874 the consul in Osaka, dissatisfied with figures on the spot, sought and got figures from the Imperial Customs in Yokohama.<sup>76</sup> This was an episode which showed that the Custom

House in Osaka was answerable to a central authority, even if in this case no better figures were made available. The consular report published in 1873 on the Nagasaki trade of 1872 noted the use of many new forms by officials, as well as a better conduct of business in a technical sense, notwithstanding the delay in the issue of permits: "It is a matter of general congratulation that greater care is now exercised in collecting the duties than used formerly to be the case."<sup>77</sup>

The Ministry of Finance, in contrast to the *bugyō* whose functions were manifold, was devoted exclusively to the raising of revenue and, of course, the control of expenditure to meet the pressing needs of a cash strapped state. Unlike the Foreign Ministry, whose initial role had been stop gap, the Finance Ministry had officers of its own in the ports. Officials trained in the old school of *bugyōsho* work with their local loyalties were replaced by new personnel and were closely supervised by a central administration whether they were new or old officers. Under the old system of administration, instructions had been minimal. The only instance of instructions being issued is one within the framework of the 1866 negotiations between the bakufu and foreign diplomats, which set out a modest schedule of 53 items for exports and 83 for imports, plus short lists of goods which were duty free or prohibited.<sup>78</sup> However, by 1872 the schedule of exports and imports had expanded to embrace 288 export and 1019 import items.<sup>79</sup> The schedule not only listed items but also set out details, the better to illustrate how to treat the items for revenue collecting purposes. Such a schedule, applicable to all officials, was essential for effective revenue collection and for statistics as well. The scope of the trade figures was also widened in 1873 to include a broad range of official purchases. While purchases of firearms and ammunition were included in the statistics at least from 1868, the figures were said to be below the actual amounts. The purchase of ships remained excluded, though the scale of these purchases both before and since 1868 was well known, and commented on by consular officers among others.<sup>80</sup> But from 1873, the year in which the Ministry of Finance took effective charge of the compilation of data, official purchases were estimated in full: the figures were as low as 797,395 dollars in 1873, and as high as 3,475,277 dollars in 1875.<sup>81</sup> From 1879, official purchases were no longer identified separately within the tables. With all these changes, in trade as in other areas, the statistical age had well and truly begun in Japan.

The pattern of monthly returns, well established in pre Meiji times, continued uninterrupted through bakumatsu and the early years of Meiji.<sup>82</sup> It does not appear that there was a fast and hard rule as to whether consuls received monthly returns or only annual returns. In the problematic case of Kanagawa in 1866, the consul seems to have counted on an annual return and either did not receive, or disregarded, monthly returns. From 1873 onwards, the monthly figures provided the basis for the Ministry of Finance's regular annual, and even half yearly, returns.<sup>83</sup> From January 1873 onwards, copies of the monthly returns are fairly complete, and the few surviving documents are part of a now lost or dispersed but once large corpus.<sup>84</sup> They served as the source for the monthly breakdown from 1873, published in later official documents.<sup>85</sup>

In the bureaucratic process of making statistical knowledge known within the administration, printed documents appeared at least as early as 1869. In the bakumatsu years, the British consuls were already receiving details of trade in the individual open ports, but the first BPP reference to tables for all Japan in 1873 indicates an immediate awareness of the new Japanese reports. From January 1873, the preface to the monthly returns declared that "beginning with the first month of the present year, a notice will be prepared here of exports, imports, values, quantities, and shipping, conveniently arranged for general information and

published under the title of ‘Tables of imports and exports at all the ports.’<sup>86</sup> The figures were all the more accessible by their publication in movable type, which replaced the cramped and rather difficult presentation in the woodblock printing of earlier years. The publication of tables in movable type was also accompanied by a general tightening up in presentation.

Figures for 1873, in the first of the new annual returns took up 140 pages, and were diffusely structured with each port given separately. Later tables, showing the ports within a general tabular presentation, typically took up a mere seventeen to twenty three folios, and the new sophistication was reflected in the fact that folios soon ceased to be described as pages. From 1873 onwards, the figures are final versions and create no internal confusion. For earlier years the data appear to be drafts, and are far from problem free. The new presentation, together with the use of the English language, would seem to be consequences of recruiting English speaking foreigners in the early years of the Ministry of Finance, and the Statistics Division of that ministry is probably one of the fruits of the change. In typical fashion, however, Parkes’ attitude was begrudging. Though we may assume with confidence that he knew of the new monthly reports, his immediate response was a call for a quarterly return.<sup>87</sup>

The inclusion of figures from 1874 retrospectively in several compilations in the 1880s by the Ministry of Finance has led to a more formal status being accorded to them than to earlier figures. However, the figures for 1873 have clear cut internal evidence of their authority, and indeed are particularly informative on what was taking place within the Ministry of Finance. Reports in the 1870s were, however, not public documents; they were strictly speaking internal documents, made available to certain parties as a favor. This fact is reflected in the wording of the BPP, which refers to being “furnished” with the reports. The Ministry of Finance’s first formally published report concerned the trade of 1882, and was the prelude to a series of annual Ministry of Finance returns, appearing under the title of *Dai Nihon gaikoku bōeki nenpyō* 大日本外国貿易年表 published by the Customs Bureau (*Kanzeikyoku* 関税局; later, *Shuzeikyoku* 大蔵省文庫), and variants).<sup>88</sup> From the first issue, the reports also included retrospective summary tables of export and imports in gold yen dating back to 1868. From the 1884 report onwards, a table was included for imports and exports of bullion and specie from 1872. The reports were immediately recognized by the British legation. The first report was referred to in the legation’s own report, filed on 15 July 1883, which stated that much of its analysis was based on the figures in it.<sup>89</sup> For the early post 1882 years, surviving copies of the reports are few and are to be found only in the Finance Ministry Archive (*Ōkurashō bunko* 大蔵省文庫), the Prime Minister’s Office Bureau of Statistics Library (*Sōrifu tōkeikyoku toshokan* 総理府統計局図書館), and the National Diet Library. This is a remarkable illustration of the poor survival rate of printed and manuscript documents, even in the conditions of early Meiji Japan. That the reports no longer appeared with the alarming speed characteristic of reports in the 1860s reflected a greater degree of serious final processing of figures.<sup>90</sup>

The first woodblock printed figures of exports and imports for the years 1869–1872 are now available in modern publication.<sup>91</sup> These figures were compiled under the aegis of the Foreign Ministry (1869, 1870) and Ministry of Finance (1871, 1872). For 1869, the surviving data are for quantities only, not monetary values. The figures for 1870 are not aggregated for the first half of the year, and only incompletely for the second half of the year. Figures for 1870 are valued in ryō, though the presence of a few figures in unconverted dollars supports the hypothesis that this document was not a finished one. For the year 1871, the first year of Ministry of Finance management, totals were aggregated into gold yen, as of course they were

for 1872.<sup>92</sup> It is very clear from the sparse surviving evidence that there was an ongoing loss of data through late bakumatsu and early Meiji years.

Statistical reports were printed from woodblocks only for a short time. Monthly, half-yearly and annual figures were set in movable type from January 1873, in English as well as Japanese, and in modern—Western—tabular fashion. Close to this date, perhaps beginning earlier but certainly terminating in June 1874, an effort was made to gather retrospective runs of figures for preceding years. There is a woodblock printing of a retrospective run of export quantities from 1866 to 1873 by the Customs Office, dated June 1874. There also exists a manuscript document with a run of values as well as quantities in a remarkably neat and uniform hand, stopping short in 1872. The absence of corresponding runs of tables for imports, reflects the confusion or loss of data characteristic of the pathetically small and defective corpus of surviving returns before 1873. The fact that the retrospective runs of figures for exports could be compiled up to 1872 and 1873 respectively shows that some data were to hand, and the tables are especially intriguing in hinting at some access to records preceding 1868, in other words for 1867 and 1866. (The latter is of course the year for which records for Kanagawa were lost).<sup>93</sup> The Ministry of Finance observed in January 1873: “It cannot be said that the details of those statistics [of recent years] were carefully preserved.”

The dearth of extant sources serves as a modern footnote to what the Ministry of Finance said in 1873. Yamaguchi and Ōuchi writing in 1968 drew on figures in the Ministry's archives for 1869 and 1870, and in Tokyo University Economics Department for 1871 and 1872. Duplicates of figures for 1870–2 exist also in the Japanese National Archives (Kokuritsu kōbunshokan 国立公文書館), though its published calendar does not identify the sources from which they were acquired. The best guide to the early statistics is *Yokohama shi shi: Shiryō hen* and a series of photocopies in the Yokohama Kaikō Shiryōkan 横浜開港史料館.<sup>94</sup> There are trade returns in the National Diet Library 国立国会図書館 (though lacking one for the year 1869) in microfilms, made in the 1960s from the Japanese National Archives and other sources.<sup>95</sup> The Ministry of Finance's own archives were destroyed in the 1923 earthquake. Microfilms which the Ministry has deposited in modern times in the National Diet Library, and which it claims to comprise all the early material in its possession, originated in post 1923 deposits in the Ministry, the Matsukata collection, and two collections deposited by the Matsuo 松尾 and Shōda 勝田 families respectively.<sup>96</sup> The Matsuo and Matsukata collections, thin for the 1870s, do not contain trade figures. The absence of statistics in the Matsukata deposit in the Ministry of Finance or in the published Matsukata papers is particularly to be noted, as Matsukata was head of the Customs Bureau in the 1870s.<sup>97</sup> The sole case of a contemporary trade return (quantities in the second half of 1870) lies in the comparatively recent deposit in the National Diet Library of the papers of Inoue Kaoru 井上馨, Vice Minister of Finance 1871–3, and the holder of many later offices of state.<sup>98</sup> Two modern writings, one in 1962 and the other in 1968, refer to the existence of a return of trade figures for 1869 in the Ministry of Finance archives.<sup>99</sup> As the Ministry of Finance archives are not now open to the public, the survival or current status of this very rare return is not known. The first year of Meiji, 1868, is even more sparsely documented: Yamaguchi and Ōuchi even speculate as to whether a return for that year had been compiled at all. In fact, one was attempted, and a return for the year survives in *Kanagawa fu nissshi* 神奈川府日誌 (Kanagawa administration daily register), though it is inevitably only in the form of an entry into the daily register.<sup>100</sup>

An area of uncertainty is whether bullion and specie were included in trade totals. A

modern (1935) study, *Nihon bōeki seiran* 日本貿易精覧, suggests that exports for 1868–1871 in the yen versions include movements of gold and silver (which would impede comparison with other years and with the BPP figures in general).<sup>101</sup> The facts are far from clear, however. The totals of Japanese trade in the BPP are drawn from the Custom House data, and positively exclude currency movements. Certainly, Japanese and foreigners alike were aware of movements of precious metals and specie, and consular comment was accompanied by some figures. The BPP report of 1870 referred to heavy shipments of coin and bullion from Japan in 1869,<sup>102</sup> and for the following year the report suggested that outflow of coin and bullion in 1870 was of the order of ten million dollars.<sup>103</sup> Some statistics of bullion and specie existed and, as early as 1863, figures of movement in and out of Kanagawa were recorded.<sup>104</sup> For 1871, Hyōgo/Osaka exports of treasure were estimated at 2,258,654 dollars by the Custom House, and at 5,019,011 by the Chamber of Commerce.<sup>105</sup> Kanagawa consulate also reported figures for treasure for the same year.<sup>106</sup> For 1873, details for all the open ports were reported.<sup>107</sup>

While general totals including gold and silver movements were given in BPP, consular officials did not supply figures regularly or in standardized form. This suggests that information was not always to hand. It seems equally likely that knowledge on the Japanese side was imperfect. Revealingly, in 1882 the Ministry of Finance began a series of annual volumes of statistics on foreign trade (*Dai Nihon gaikoku bōeki nenpyō*), featuring a retrospective run of trade figures back to 1868, but the first data for bullion and specie to be published appeared not in the volume for 1882, but two years later, and went back only to 1872. A note to the table in the 1884 *Dai Nihon gaikoku bōeki nenpyō* stated tersely, “The Statistic (sic) before year 1871, being uncertain, is excluded.”<sup>108</sup> The dilemma facing contemporary editors may be seen from the tables of exports and imports for 1869–1872 published by Yamaguchi and Ōuchi in 1968. There, bullion and specie are recorded for one year (1872) only, but duty free goods (in which category bullion and specie were included) were for some reason declared “unclear” (*fushō* 不詳) in the concluding summary table, and hence do not feature in the grand total for imports and exports. The 1872 count without the inclusion of bullion and specie in commodity tables at 16,847,033 yen, was higher than the 16,056,388 yen in the retrospective table compiled in 1874. For imports, two gold yen counts and the dollar count are much closer together, seeming perhaps to cast doubt on the presence of a distorting coin and bullion total. From 1873, study of these issues becomes easier, but care is still required with crude totals. Cursory analysis of Finance Ministry returns in Meiji 1873–6, for instance, appears to suggest that bullion and coin were included in the grand totals for imports and re-exports in three of four years.

However, the complexity of figures for the early years is underlined by the wide divergences in 1868–1871 between totals in dollars and in gold yen (the latter by definition retrospective calculations for these years), and by a puzzling inconsistency between the profile of totals of exports and imports in gold and silver prices. Data for the year 1872 illustrate the problem. There are four separate counts for this year: one in dollars in BPP, one in gold yen from a contemporary Ministry of Finance table, one of exports from tables for seven years from 1866 compiled in 1874 by the Ministry of Finance, and one in the first (1882) volume of the *Dai Nihon gaikoku bōeki nenpyō*. For exports, all three gold yen counts fall far short of the BPP dollar count, which is known not to include bullion and specie movements.

Problems of definition affecting the treatment of specie and bullion apart, misreadings in transcription and inconsistencies in aggregations may have compounded the errors in calculation of early statistics. Differences between figures might at first sight seem to support



the observation by Sugiyama that alternative consular and official estimates continued to exist in early Meiji times, but the differences might also have arisen from prosaic errors. As returns from the Custom Houses to the central offices of the Ministry of Finance up to the end of 1884 were stated in dollars, a possibility of error resides in the Ministry of Finance conversions of the dollar totals into gold yen in early Meiji, when documents were confused and conversion rates between dollar and gold uncertain. This is particularly the case for the table of exports for 1866–1872 in gold yen prepared by the Ministry of Finance in 1874; construction of the table involved retrospective conversions from dollar totals for 1866 and 1867 and from ryō totals in 1868–1871.

#### 4. The Transition to the Yen

The currency system at national level in Tokugawa times had been in theory bimetallic (and even tri metallic, as there were three metals, gold, silver and copper). Silver had been the currency of Osaka and Nagasaki, and gold was the basic standard of Edo itself. The introduction in 1869 of a new gold ryō marked a stage forward in creating a formal national unit of accounting. The new ryō had no direct effect on other metals in circulation: it simply made existing Edo accounting practice into a national one. Two years later, in mid 1871, new regulations replaced the ryō by a gold yen as domestic unit of account.<sup>109</sup> While in line with best new practice, it created a gold standard in internal payments. From the outset, the new system was a hybrid with a gold yen as the unit for internal payments, and a silver unit (the new silver yen in place of the Mexico dollar) intended to be confined to transactions within the open ports. The silver unit, the Mexican dollar, which was by informal agreement from 1859 the accounting unit of foreign trade, became in 1871 the *de jure* unit of foreign trade with the introduction of a silver yen (of the same weight as the Mexican dollar).

Given the monetary history of Japan and ready access to silver in east Asia, there were good practical reasons for silver becoming the *de facto* unit after 1859, and under the currency edict of 1871 it became in that year the *de jure* unit. The Mexican dollar was long the currency of account in international settlements in East Asia; its role in underpinning international business was enhanced by Hong Kong's issue of a coin identical in weight. Much of the early trade with the West after 1859 was routed through China, a circumstance which helps to explain why a majority of the international residents in Nagasaki already in the 1860s and in Yokohama in the mid 1870s (the first years for which we have statistics for the port), were Chinese.<sup>110</sup> Japan faced the dilemma of being situated firmly in the silver currency region of East Asia and at the same time of having two Western countries as major trade partners. One of these, Britain, had long been on a gold standard, and the other, the United States, had been on it from 1873. With regard to exports, Japan operated the foreign trade of its open ports before and after 1871 either in Mexican (silver) dollars or in claims convertible into dollars, so that no problems of conversion arose when exports were declared at the Custom House in silver. Likewise in the case of imports, the conversion at the Custom House of prices on invoices from silver currency countries involved a purely routine conversion. Only invoices of imports from gold currency areas such as Britain presented a problem, but they accounted during the 1870s for two thirds of the import trade of Japan. Conversion between gold and silver currencies was not an intrinsically difficult problem. It became problematic only because the conversion of invoices at a fixed rate, abandoned in 1865, was in effect resurrected by the creation of a fixed rate of exchange between silver and gold units in the 1871 currency edict.

Some words of explanation are necessary at this point on two distinct though overlapping issues. The gold ryō of 1869 had been a unit of account not physically embodied in a coin, and hence no rate of conversion between ryō and dollar had been settled. However, the new gold yen of 1871 created a problem in that it was accompanied by a formal silver standard confined to the open ports. A gold coin weighing 25.72 grains was the standard for the new gold yen; it was equal in value to a silver yen of 416 grains, that is the weight of the Mexican dollar. The mint ratio or exchange rate between the two metals at 1 to 16.2 reflected the international rate of exchange of 1871. However, a fixed ratio of exchange could only have worked in a closed system (a situation with which the 1871 act in creating a separate currency for the open ports had tried rather simplistically to grapple). There were two consequences to the 1871 edict. The first, a serious material one, was that gold was increasingly either exported or hoarded, since it could be purchased at the overvalued parity of silver in 1871, and as gold disappeared silver became a *de facto* standard beyond the ports. The second consequence, discussed below, was primarily a bookkeeping one, insert comma as customs officers observed here the fixed exchange rate between gold and silver settled in 1871 in converting invoices for the purpose of levying duties from gold currency countries. In doing so the totals were artificially depressed by a persistent fall in the value of silver on world markets undermining from the outset the rationale of a fixed rate, and the sum total of the invoices by definition understated the real value of the trade.

The change of government in December 1867 had brought on apprehensions of currency destabilization. Uncertainty as to whether the new government would last combined with delay by that government in introducing regulations to meet its currency needs and gave rise to serious confusion. Good coin, whether gold or silver, was in the short term either hoarded or exported and, adding further to confusion, some of the exports were on government account. As a result, inferior and even unfamiliar coins, new and depreciated in metal, came into circulation, along with paper.<sup>111</sup> Good quality silver and gold grew scarce as both were hoarded and the latter was sent abroad, and rates of exchange between coins fluctuated wildly. In the volatile market of 1871, for instance, the price of the *nibu* 二分金 (an alloy of gold and silver) varied by up to 30 per cent.<sup>112</sup> New coins provided for by the regulations of 1871 were slow to appear, and as late as 1872, the gold and silver yen had not reached Nagasaki. Increasingly, internal settlements were made in paper; the high discount on paper in the short term was less a reflection of doubts about paper than of uncertainty about the worth of the coins, which were their ultimate guarantor of value. Paper in fact began to gain ready acceptance quite quickly, and eventually circulated at par or even at a premium. There were two sharply contrasting currency markets, an internal one characterized by uncertainty and fluctuations, and a foreign exchange market in which silver traded freely against gold in the ports. Without any undue problems, inflows and outflows of coin reflected either short term speculative purposes, or the transfer in metal one way or other of the net balance in total transactions on current and capital account.

The peculiar coexistence of two media of account, a silver unit for the ports and a gold unit for domestic transactions, has been responsible for the belief that it posed a special or complex statistical problem in calculating aggregates of Japanese trade. There is, however, no reason why the existence of two currency zones of itself should present difficulties, and the undervaluation of the total value of trade would not automatically follow from the fact of operating in two currencies. The initial aggregating of invoices in different currencies in the open ports would be a matter of elementary currency conversions, translating invoices that were not expressed

in silver into silver terms at market rates. Conversion between two metals was not of itself the root problem.<sup>113</sup>

The processing of statistical returns from dollar totals into the new yen should not have occasioned a problem, in theory, at any rate from 1872. For the years up to 1871, in retrospective calculations the fact that dollar and gold yen totals of foreign trade differed substantially reveals that there had been some other problem, not arising from the simple existence of two currencies. In 1868–1871, totals in dollars exceeded gold yen (as set out in the Ministry of Finance table for 1882) in three of four years for exports, and in one of four years for imports. These figures originated in dollars converted at the time for the first three years into ryō totals (and retrospectively into gold yen), and revised once more in or before 1882. More puzzling at first sight than variations from year to year between totals in dollars and in gold yen is the lack of consistency in the movement of converted totals as between exports and imports. The explanation is that there was strong Japanese demand for dollar coins because they could be used in re coining a deficient supply of coin. One result was that foreign buyers of Japanese goods, benefiting from the demand for silver in Japan, could dispose of their dollars at a premium. Japanese buyers of foreign goods might be able to pay in coin or paper money, but poor coin and paper were heavily discounted when they were accepted. It seems most likely that the Ministry of Finance made separate calculations using different terms for exports and imports, taking account of the quite different payment conditions for exports and imports respectively. After 1871, conversion from silver dollar totals to yen within Japan should have been at parity, at least in theory. In practice, this did not apply to the 1872 figures. The 1872 figures for imports exhibit near concordance among different estimates (a dollar total and two somewhat lower gold yen figures). On the other hand, for 1872 exports, the dollar estimate exceeded yen estimates by the largest margin recorded for either exports or imports in any year in 1868–1872. The discrepancies may be accounted for by the peculiar circumstances that caused bullion of all sorts to be in short supply in the early Meiji years. Given the demand for silver bullion to create new issues of both silver ichibu and alloys of silver and gold, foreigners imported dollars expressly to take advantage of a Japanese premium on silver dollars. The premium was supported by the siphoning off of the dollar into the hands of currency speculators or into purchases at the mint that opened in 1871.

Regarding the differences between yen and dollar aggregates in the statistics, Sugiyama observes, “After 1873, there is a fair degree of consistency between the two series of figures. I have been unable to find a reasonable explanation of the continuing discrepancy in the period 1869–1872.”<sup>114</sup> However, he seems to have seen the problem as one of differing systems of recording figures rather than one of conversion rates. The difference between dollar and yen totals for the years 1868–1870, and equally for 1871 (when the official gold-silver yen parity was defined only in mid year) and 1872 reflect several circumstances. For one thing, a widening medley of currency offered in payment for imports made general calculations for converting annual totals of trade problematic. Another factor was that the market placed a premium on dollars as a means of payment for exports, despite the existence of an official fixed rate for gold and silver yen. This benefited those who could pay dollars for their purchases. Demand for the dollar had been weak as late as 1866, but thereafter it usually commanded a premium.<sup>115</sup> Maintenance of a one-for-one parity was effectively impossible, and the evidence suggests that Japanese officials in Tokyo recognized this. In the more orderly monetary situation of 1875, and in contrast to much higher premiums in prior years, a slight premium was officially declared for

the silver yen: 100 silver yen exchanged for 101 gold yen.<sup>116</sup>

Movement toward parity of yen and dollar was already evident in 1873–1875, though the momentum was not maintained in 1874, and wavered somewhat for several subsequent years.<sup>117</sup> The Introduction to the *Yokohama shi shi: shiryō hen* of 1962, brief but by far the best analysis of the issue, observed that the figures were substantially the same from 1877.<sup>118</sup> Yet some divergence still lingered on. The significance of 1879 as a watershed in trends, however, is easily explicable. In 1878, Japanese authorities established a silver unit of currency equal to the dollar for general use (not just in open ports), and in 1879, they declared the parity of the dollar and silver yen. Earlier conversion of the dollar and silver yen into gold yen fluctuated in tandem, and official attitudes to conversion are totally obscure. By the end of the 1870s, the Mexican dollar was still imported, but it had for all practical purposes disappeared from day-to-day transactions.

As Custom House returns continued to be given in silver, the British consuls continued to tote up aggregates of trade from the returns from the individual Custom Houses; consular officials did not immediately accept the new central returns in gold yen created by the Ministry of Finance counts. Copies of the original returns from the Custom Houses, which would have been in dollars, are not known to have survived. Only with the consular report in early 1886 on the trade of 1885 did the British representatives switch from figures in dollars. The consular reports included in the BPP, thereafter, gave totals in sterling, converting on the basis of the rate for dollars or silver yen as quoted for the purchase of drafts drawn by merchants or bankers on London. One silver dollar was equated to one yen from 1885.

In previous accounts, the extent and duration of monetary confusion has been greatly exaggerated—particularly the duration. Misunderstanding has been reinforced by a view of paper money as one of its causes. In fact, the trend towards stability in conversion, already apparent in 1872, was itself a consequence of a growing preference for paper that facilitated stabilization of payments within Japan, and simplified problems of settling on conversion rates. Contrary to statements that paper currency continued to depreciate, paper changed hands at parity with silver or even at a premium once the confusion of the early Meiji years passed.<sup>119</sup> The inflation following the Satsuma 薩摩 rebellion of 1877 was in no sense a proliferation of earlier monetary problems, but rather a straightforward case of a general inflation caused by soaring expenditure and the sudden expansion in the issue of paper at that time. After 1881, it would be gradually reversed by the famous Matsukata deflation. The large discount on paper in the wake of the 1877 rebellion is not germane to the exchange problem. It is a textbook case of an inflated issue of paper in a budgetary crisis, and its effects are thus more easily comprehensible than the political and monetary complexities of the first years after the Restoration.

In understanding the currency problems of these years, two separate issues have to be distinguished. The first is the declining value of silver in the wake of the fall in the price of silver bullion relative to the price of scarcer gold metal; this was a consequence of the increase worldwide in mining output. The Japanese government's 1871 attempt to establish a fixed rate was thus progressively more unrealistic. The second issue concerned conversion of gold prices into silver prices in import invoices. A fixed conversion rate was settled by administrative fiat, as had been the case up to 1865.

In regard to the first of these two issues, Japan was on the way to becoming *de facto* a silver currency area, through the operation of Gresham's law, which holds that bad money drives out good. A new silver coin issued from 1871 to 1877, intended to rank with the Mexican dollar

and to enlarge the supply of silver currency for a growing foreign trade, was confined to the ports.<sup>120</sup> In 1878, a dollar coin identical to the Mexican dollar was made valid in all public and private payments throughout Japan, and in 1879 it was formally decreed the equivalent of the Mexican dollar. Circulating beyond the confines of the ports, it represented a late stage in currency reform, as Japan, although *de jure* bimetallic, came *de facto* to use silver as the medium of exchange. The scarcity of gold had threatened to undermine a monetary system in which gold was the basic standard for internal trade. Silver inflow was sizable in 1882–1884, and movements of gold either way had become small and few. In 1883, interest on *kinsatsu* 金札, a form of government bond, originally issued in both silver and gold was made payable solely in silver. This was an implicit admission by the Meiji government that the country had moved to a silver standard.<sup>121</sup> Gold was not abandoned in a formal sense, but the 1878 authorization of national circulation of a dollar coin meant that, for all practical purposes, a silver standard was in place, and would prevail until the Japanese government officially adopted the gold standard in 1896.

Over the course of the 1870s and 1880s, silver purchased progressively less gold. The relationship was commonly expressed in the amount of sterling acquired by the dollar in drafts drawn on London. It could also be expressed, although more rarely, in terms of the relationship between the gold yen and the silver yen, which was beginning to replace the dollar as the currency standard of Japanese ports. In gold yen-silver yen quotations, the purchasing power of the gold yen became progressively greater after 1880. Gold yen were at a premium throughout 1882, for example, as quotations averaged about 92 1/2 gold yen for 100 dollars.<sup>122</sup> Exchange quotations for gold yen in terms of silver yen rather than the dollar, departing from their formal parity, were a new bookkeeping convention to express actual transactions in the ports where the silver dollar exchanged against foreign gold currencies, and signified that the silver yen (despite or because of its parity with the dollar) was beginning to acquire an identity in its own right.

The second complex issue in this story of the two metals was the fixed rate used for the conversion of gold prices in import invoices into silver prices. After 1871, there were two exchange rates for conversion of gold yen into silver dollars, the open market rate determined solely by currency transactions in the ports, and a fixed rate for gold standard currencies solely for Custom House transactions. For sterling the rate was settled at 4.88 dollars to the pound sterling (or 4s.1d. for the dollar). Conversions at this rate became unrealistic in the long term. The dollar, worth 4s.1d. in sterling as late as 1875, was only 3s.8d in 1884, and by 1887 it was down to 3s.2d.<sup>123</sup> These rates are evidence of the strengthening of the British pound; in the early 1860s, a Mexican silver dollar had been equivalent to 5s. or 5s.6d.

So long as the government-fixed rate of gold-silver yen exchange was in place, it was beneficial to traders. It was of no consequence as far as the settlement of daily private trade accounts was concerned, but when settling payment of *ad valorem* duties traders declared transactions at rates that greatly overvalued silver compared with actual market conversion amounts. Japanese government adherence to the fiction of an unchanging gold-silver rate thus entailed a loss of revenue to the treasury. In bookkeeping, when invoices figures were aggregated, statistics of imports were understated. The anomaly was finally ended in the last quarter of 1888 when imports and exports were valued in identical fashion on a basis intended to reflect the market prices of silver. A year later, the results were set out clearly in the British consular report for 1888:

For the first nine months of the year 1888, every pound sterling of the original cost of

all English and American articles of import was entered in the customs returns as 4 dol. 88 c., whereas, throughout the whole of the year 1889, each pound was entered at values varying each quarter, but the average of which for the whole year was 6 dol. 46 c.<sup>124</sup>

In the aggregates for 1888, the figures for the first three quarters were adjusted to conform to the new basis introduced for the fourth quarter. The sharp rise in the total value of imports over 1887 is nominal, not real; it reflects the adjusted exchange calculations of the Custom House. From 1888, totals were by definition realistic. When the fixed rate for conversion of gold into dollars was abandoned later in 1888, the Ministry of Finance did not recalculate past figures (apart from figures for the first three quarters of 1888). Some scholars, notably Tatemoto and Sugiyama have taken it on themselves to revise the figures for the years prior to 1888 in order to take account of past systematic understatement in the figures for imports.

Superficial differences between published runs of figures could be taken to support the argument that separate compilations of figures were created in the ports or, alternatively, that great confusion existed in processing data. Runs of data in dollars and gold yen respectively might appear to support the existence of distinct or separate figures. Thus export figures are presented in the *Yokohama shi shi* in dollars for both Yokohama trade and national trade,<sup>125</sup> but more commonly, as in Baba and Tatemoto (1968),<sup>126</sup> Sugiyama (1988), and other recent works, they are in gold yen. The *Yokohama shi shi* figures down to 1884 were drawn from BPP, and thereafter from the official *Nihon gaikoku bōeki nenpyō*.<sup>127</sup>

Scholarly recalculation to take account of undervaluation of imports was first executed by Tatemoto, and later by Sugiyama.<sup>128</sup> This is not a straightforward exercise. It is relatively easy from the mid 1870s as gold and silver units of account were close to parity. As Sugiyama noted, it is fraught with serious problems between 1869 and 1873, given differences in the figures. For this reason, Sugiyama attempted major recalculations only for the years 1874–1887. He did also, however, make an effort also to revise the figures for imports and exports for the years 1860–1868.<sup>129</sup> He posited that 1869 was a “normal” year, and for 1860–1868 he converted dollars into yen on the basis of the margin of excess of yen for dollars, shown by comparison of the two measures for 1869 (namely, the BPP and Ministry of Finance figures). If this is a correct interpretation of what he says he did, his methods are untenable. They could only end in an arbitrary result. It is contentious, to say the least, to regard 1869 as in any sense “normal.” The relationship between various figures in 1869 (or in any other year) is a product of a number of factors about which we know too little.<sup>130</sup>

## 5. The Merits of Japanese Statistics

Over the 1870s, British consular acceptance of the Japanese figures became ever more positive. Even if the Nagasaki consul complained of “a difficulty in getting reliable statistics” in his report in early 1874, he conceded that “the better regulations now existing at the Custom House render this not so insuperable an obstacle as formerly.”<sup>131</sup> While the consular report on Kanagawa for 1878 found that the Custom House data did not agree in all respects with Chamber of Commerce estimates, it declared them “tolerably correct.”<sup>132</sup> Some problems were now of a different order, and arose from deficiencies in Chamber of Commerce data. Thus, the Chamber of Commerce in Kanagawa enumerated silk in bales in its 1880 accounts, while customs figures reckoned trade by weight. The Chamber of Commerce rate of conversion of bales into piculs underestimated the weight of bales.<sup>133</sup>

Osaka, an open port only from 1 January 1868, nine and a half years later than the other

ports, seems to have been out of step with this story of improvement, at least in its first years of foreign trade. It is hard, however, to draw a line between objective weaknesses in the Custom House and the idiosyncrasies or limitations of Abel A. J. Gower, the consul from 1869 to 1873. For 1868, Acting Consul J. F. Lowder had simply reported the Custom House figures without comment.<sup>134</sup> For 1869, however, Gower provided figures based on “private information” then, inconsistently, relied mainly on “the very imperfect Custom House return” for 1870.<sup>135</sup> From reluctant acceptance of the Custom House returns for 1870, he progressed to outright hostility to Custom House data for 1871 and 1872, and he assembled figures of his own from the applications for permits in those years. His doubts were fuelled by figures for disposals compiled by the Chamber of Commerce. The divergences between the Custom House figures and the Chamber of Commerce calculations led him, in February 1872, to go so far as to declare the “worthlessness of the Japanese returns.” He dismissed the applications for permit forms as improperly filled in, to the extent that “the labor spent in endeavoring to compile correct Tables is little better than lost.”<sup>136</sup> His view was no less strong in the following spring, when his report on the trade of 1872 contained the following phrase critical of Japanese officials: “The Custom House authorities [have not] yet adopted any proper system of preparing the returns themselves”.<sup>137</sup> Compiling his report for the year 1873, he applied to the Ministry of Finance customs office in Yokohama for returns, apparently because of dissatisfaction with those received locally, and lamented that the employment of foreigners (presumably in Yokohama) had failed to raise the statistical standard.<sup>138</sup> Gower’s failure to appreciate that estimates of disposals and Custom House returns had fundamental differences deepened his dismissive attitudes. The fact that, unlike other consuls, he did not use the actual term “disposals” in his writing suggests that he was oblivious to deeper statistical distinctions. His shallow understanding, and his helplessness implicit in his reliance on the Custom House data “principally” for 1873—despite repeated strictures on them—contrast with the measured and competent assessment of the figures for 1874 and 1875 by his successor, Acting Consul (later Consul) A. A. Annesley.<sup>139</sup>

Whatever the early deficiencies, things were steadily put to rights by the Osaka Custom House. Proper attention to the Application for Permit forms was, of course, a vital base for statistical progress. A tightening in administration seems to be acknowledged in the report for 1872, even by the choleric Gower. The consul, while complaining of the absence of a system for preparing returns, noted “a marked improvement” in the quality of the filling in of the application forms themselves.<sup>140</sup> Gower did not attach weight to the fact that the relationship of Custom House and Chamber of Commerce figures was not consistent from one year to the next. For the year 1871, he merely noted that aggregates based on Application for Permit forms fell short of the Chamber of Commerce figures, while in the following year the aggregation of Custom House figures for imports exceeded the chamber figures.<sup>141</sup> He did not dwell on the contrast, but contented himself with dismissively attributing the difference in the 1872 figures to the omission of small parcels from Chamber of Commerce figures. This was facile and even evasive. The report on the trade of the year 1874 by the new consul provided both Custom House and chamber figures, and demonstrated an appreciation of the fundamental differences in the two statistical concepts. A positive (if understated) note appeared in the Osaka consul’s report on the following year (1875), which remarked on the “tolerably relative accuracy” of Custom House figures.<sup>142</sup> His report for 1876 conceded the “fair correctness” of the Custom House figures for imports, where the statistical divergence with Chamber of Commerce numbers was largest.<sup>143</sup>

Differences between Custom House returns and Chamber of Commerce estimates of “disposals” (which have led to modern confusion that there were two statistical counts) were occasionally noted in Kanagawa, e.g., in the report for 1872,<sup>144</sup> but consular reports from Kanagawa, apart from the special case of 1863, were based virtually without qualification on the Custom House figures. “Disposal” was taken as a statistical concept primarily of use for illustrating the progress of individual trades. Consuls who followed Gower in Osaka were very much alive to the issue, but the concept of disposals continued to hold a prominence in reports from Hyōgo/Osaka, which it did not in other reports. This seems to have been a consequence of the emergence by 1871 of a very vigorous Chamber of Commerce, which devoted a lot of its energies to calculations of trade.

The attitudes of consular officials in Hyōgo/Osaka were also colored by problems of transshipment, that is the arrival in any open port by coastal shipping of goods for export, or the dispatch by coastal shipping of goods from abroad. The transshipment issue was not confined to Hyōgo, but it did loom larger there than elsewhere because the port was located at a central point on the long coastline between Nagasaki and Yokohama. The problem of transshipment was not in statistical terms a specifically Japanese one. It was universal, solved in Europe at an early date only by acceptance of the practice of recording goods shipped between domestic ports at the first point of landing or last point of departure. Transshipment was first highlighted by the exports of tea, for which the issue arose as soon as Osaka became an open port: the Custom House counts of exports of tea in Osaka and Hyōgo proved to differ widely from the figures compiled by the Chamber of Commerce for 1868–1871. The Custom House figures notably exceeded the chamber’s calculations even after adjustment for omissions in the chamber’s figures in 1869 and 1870 was taken into account, and fell below them in 1868 and 1871. The erratic pattern was determined by the statistical fortunes of tea, depending on whether it was counted as a direct shipment from Osaka to the United States or as a transshipment via Yokohama. Export totals in the Custom House returns for 1868 and 1871 greatly exceeded Chamber of Commerce estimates or counts (made with access to the record of permits in the Custom House), and an Osaka consular official observed that “it is possible the customs may include them in the shipments to the latter port [Yokohama], while the Chamber properly includes them in the direct shipment to New York.”<sup>145</sup> He was speculating that Osaka Custom House clerks recorded Osaka goods destined for transshipment from Yokohama as domestic (coastal) trade items, not as export trade items. The inconsistency between years would suggest a variable practice at Osaka, with tea sometimes included as an export and on other occasions treated as a coastal shipment.

In late bakumatsu times and in early Meiji years, Custom House officers kept an account of both direct imports and exports and of intra-trade between the open ports. Thus the Kanagawa (Yokohama) consular report for 1869 gave totals of trade for both categories. Imports of 24.3 million dollars included 17.4 million dollars of direct imports and 6.9 million dollars of foreign goods transferred from other open ports. Exports were 14.5 million dollars: 11.5 million dollars of exports originating in the ports and 3.0 million dollars originating in transfers from other open ports.<sup>146</sup> The scope for double counting thus appeared in early statistics. In the case of imports, goods transshipped at Yokohama to Osaka/Hyōgo in 1873 and 1874 appeared as fresh imports in Osaka figures, “and have thus been entered twice in the Custom House returns.”<sup>147</sup> Parkes in Tokyo noted in 1874 the need to keep apart the figures for transfer trade and foreign trade.<sup>148</sup> This was notoriously a problem for the early figures for Osaka. In the case of exports,



the anomalies that had led to double counting seem to have been winkled out in time. In 1879, tea shipped in Osaka to Yokohama for the United States was not counted at the Custom House in Osaka: the consular officer, noting that the customs returns were not a complete account of tea passing through the port, obtained an estimate from the American consulate of the amounts where the ultimate consignees were in the United States.<sup>149</sup> In the case of imports, we can say that foreign goods arriving from Japanese ports were not included in Hakodate returns, at least on the evidence of Hakodate figures for goods from Nagasaki and Yokohama in 1864 and from Yokohama again in 1881.<sup>150</sup> Nor, it appears from evidence in 1881, did Osaka totals record the growing inflow of foreign textiles arriving via Yokohama.<sup>151</sup>

## 6. Conclusion

The statistical achievements of the 1860s and 1870s were real. The early years were slowed by the fact that the first statistics were collected by *bugyōsho* officials. Effective administration had to await centralized supervision, which was instituted finally in 1873. Japanese statistical achievement in the 1870s was not confined to trade statistics. A modern style population census did not take place until 1920, for economic reasons, but already in the 1870s, officials very cogently made the case for a census. For the short and medium terms, improvements in the system of household registration of Tokugawa times made it possible to go without one. The lament of British officials in 1873 that “[i]n Japan, the science of statistics is in its infancy” was disproved by the rapidity of advances in the 1870s;<sup>152</sup> over the decade, statistical deficiencies were addressed. Of course, statistical information was of value only to those who had ready access to the figures. Limited access was a point of adverse British comment as late as 1877, but this defect too was addressed.<sup>153</sup> For trade, well prepared publications began to appear from 1873 onwards in a form easy for Westerners to assimilate. These were not formal publications. Regular annual publications of trade statistics would debut in 1882. Early Meiji publications containing trade figures, moreover, were but one element in a much larger array of official publications, akin to those of Western countries. Most were in Japanese, though some also in English. By the late 1880s, the British Parliamentary Papers document the circulation to newspapers of summaries of a year’s trade at the outset of the following year.<sup>154</sup>

There are two ways of looking at the trade statistics of bakumatsu and early Meiji Japan. One is the unrealistic and culturally arrogant one of damning them because they fell short of Western standards. The other is to see them from the outset as a success. The task was to collate the new detail collected in the Custom Houses into statistics. Those Custom Houses themselves represented an institutional innovation. After 1868, this decentralized work had to be brought into a centralized structure, producing in the process more effective and accessible figures. The process of centralization, tracing its origins back to 1859, required a whole sequence of events: first, a response within the *bugyō* offices of the ports in collecting duties and in assembling the detail into statistics of trade which we can date to 1859–1867; second, imposing centralized direction on this work in 1868–1871 and, from 1871, of doing so under the aegis of the Ministry of Finance; and finally, streamlining procedures and publication in the period 1873–1882. The major achievement was that the work approached Western standards within about fifteen years from the opening of ports in 1859.

Trade figures have to be respected on their own terms. Japan presents an unusual problem in that it had to adapt to a pattern of financial settlement introduced by Westerners in the 1850s that made the dollar the unit of account and the most common medium of exchange in

the open ports, despite the fact that gold was the currency of Edo (and from 1871, the unit of account for all Japan). Japan also had to cope with the fall in value of silver, a vitally important medium of exchange. Japan was not alone in having to deal with such problems, but as its foreign trade burgeoned, and as it found itself involved in two currency regions, it had a hard row to hoe. All early commodity statistics are deficient for balance of payment purposes, whether in prices or in omission of categories of goods. For calculating the commodity component of the balance of payments, it is legitimate to attempt to adjust them. In the case of the United Kingdom, for instance, this was done to great effect by A. H. Imlah in his *Economic Elements in the Pax Britannica*.<sup>155</sup> However, such calculations have to be confined to specific purposes with caveats about their own limitations, if applied to wider ends. If they are quoted not as estimates for a well defined purpose but treated as a critique of the statistics themselves, then they result in some misunderstanding of the problems and an underestimation of the achievement itself. Where, as in Japan's case, there is a belief that several sets of trade statistics exist, new attempts to calculate statistical series for commodities pose a danger of adding to the confusion.

The gathering of statistical information and its processing into aggregates of trade were more systematic and successful than critics charged. Japan's success in creating modern statistics was quite impressive. The fact that consular officials over the 1870s increasingly conceded the merits of the figures illustrates this. Chamber of Commerce calculations were never seen as alternative to the Japanese statistics; nor was there a basis for serious criticism of these statistics by the late 1870s. Indeed, it is ironic that, although the BPP are the best and most convenient source for trade statistics up to the mid 1880s, the comments in the BPP up to the 1870s have been responsible for a very negative view of the data at large. This is not least owing to the failure of modern commentary, Japanese and English alike, to understand the significance of the "disposals" concept to which contemporary English diplomats and consular staff had attached so much importance.

The statistics are, of course, not perfect. The lack of c.i.f. (cost of insurance and freight included) and f.o.b. (free on board) definitions marks them off from other figures. However, European trade figures also adjusted to demands for greater precision about definitions only late in the day. Here it is important to bear in mind the defective valuation of imports to Britain to 1854, highlighted in Imlah's study. Even after 1854, the Board of Trade in London at first valued imports and exports simply by canvassing dealers for price information. Declared values (that is, values as declared at the time of making entry at the Custom House) became the practice in Britain only from 1868, but they had been the norm in Japanese statistics from 1859.<sup>156</sup> Moreover, given the deficiencies in Japanese statistics in recording ships, it is salutary to recall that in Britain, a ship exporting country, ships sold abroad were not included until 1899, and figures of imports of coin and bullion were collected only from 1858.<sup>157</sup> If we regard f.o.b. and c.i.f. price definitions as a refinement of very recent origin, and not as a canon for judgment of mid nineteenth century statistics, Japanese figures were collected and totals aggregated efficiently by the late 1870s. From 1875, the earlier omission of the major part of purchases on official account was remedied.<sup>158</sup> Criticism on c.i.f. and f.o.b. grounds was imprecise in the 1860s and 1870s because the concept was a new and unfamiliar one internationally. While some relevant observations on the score of valuations were made in the early 1860s, the main concern was one about disposals, a concept that ran counter to the entire object of statistics of international trade. By the 1890s, it was less a question of remedying defects than of adopting more advanced statistical concepts that had become widely recognized only in the immediately

preceding decades.

This article has examined the Japanese capacity to collect statistical information and retain a record of it. A study such as this should be placed in the context of the archival history of Japan. Part of that is the story of destruction by fire or war, but the absence of records is more often due to the fact that records were not retained. The diffuse copying of the records by or for officials was both a product of such a system and, at the same time the means by which some material for the years before 1868 has survived in random fashion. It is striking, given the nature of the system, that it was private (or at least unofficial) copying, usually into manuscript notebooks (*shahon* 写本), that ensured that many statistics survived. As proof of how fragile the source base is, we need merely point out that the actual counts in dollars for the years 1859–1884 are known only from BPP. The British reporting shows evidence that its authors sometimes consulted the Americans, who retained records of their own on trade. The British sources are the best known, largely because of the magnificent series of consular reports in BPP, and their prompt publication. As early as the 1880s, they provided data for the first Japanese scholars of foreign trade, and their figures have often been repeated in later studies both in Japan and abroad. The Japanese trade of other Western countries, except the United States, was relatively small, but a consultation of their consular sources, manuscript or published, should in all probability add to the story of relations between officialdom and the new communities of the open ports, and perhaps to our understanding of the evolution of the data themselves.

The sheer capacity of the Japanese administrative system to function through the bakumatsu and early Meiji years is noteworthy. The ability of the system to function in crisis, as in the 1850s and 1860s, is important; it is a measure by which to assess bakumatsu society and polity in general. It suggests we need to qualify widely held assertions of administrative breakdown. It has been assumed that the absence of statistical information itself points to administrative failure in the 1850s. The capacity, however, was there, as indicated by the fact that the British diplomat Mitford got a full summary of the census of Osaka for 1866 even though the last known figures from the Japanese side are for 1862.<sup>159</sup> Trade figures existed in the 1850s and 1860s, and an ability to innovate is illustrated in particular by the figures for Ezo 蝦夷 imports to Osaka in 1856–1858 or for Edo in 1856. As statistics are a creation of administration, their existence, even if we can document them only imperfectly, shows that the Japanese administration remained in working order.

## APPENDIX

### Appendix 1: The Paske-Smith Figures for Exports and Imports in the Open Ports

The much quoted figures compiled by Paske-Smith for his book in 1930, together with other data principally drawn both directly and indirectly from British sources, are the basic figures around which Ishii in 1944 built his tables of the first decade of Japanese trade in the open ports. It is a matter of interest, therefore, to seek the identity of the sources Paske-Smith drew on in 1930, especially given some wide variations in his figures from those in the BPP. (Paske-Smith does not appear to have consulted parliamentary papers at large, though from internal evidence at least one paper in either published or draft form was available to him.) An answer to the question is all the more pressing as early consular records for Japan are not listed in the 1963 *Guide to the Contents of the Public Record Office*, part 2 (1973), p. 142. Details appear only in the very recent on-line listing of records. They also have high list numbers,

which seems to confirm that their listing is comparatively recent. The records seem to have been “repatriated” to London at the outset of 1942. For Yokohama, local consular records exist from the last quarter of 1923 and again from 1945, although the earlier records were destroyed in the earthquake. From Nagasaki, they run from the outset of the mission to 1937. None now exist for Hakodate, and no pre Second World War records exist for Osaka/Kobe. It would seem then that Paske-Smith would have had easy local access to statistical material in the 1920s. The abrupt end of the Nagasaki records in 1937 suggests that, perhaps, records to that day had already been transferred to Tokyo for unknown reasons before the war crisis. The absence of consular records for Hakodate and for Osaka might appear speculatively a result of misfortune in their transfer, or of the sheer impossibility of moving records at short notice, from remote locations to Tokyo in 1942.

Apart from consular archives, early archives of the embassy (and former legation) itself were already in London in the FO 242 series. This series, though principally one of correspondence with London and of miscellaneous correspondence, proves on inspection to have incoming consular letters to Edo (Tokyo) from 1858–9 for Hakodate, from 1859 for Nagasaki, from 1862 for Kanagawa, and from 1868 for Hyōgo. While these transferred series in general are held to be very defective, the FO 262 series for the Japanese volumes consulted seems more or less complete in some but not in other years. Effectively, the incoming letters from consulates touch fleetingly on other issues, while dealing mainly with establishment matters and in fascinating detail with the working of extraterritoriality (the legal functions exercised by consular stations). Thus, while consular archives no longer survive for any consular post except Nagasaki prior to 1923, the FO 262 series serves as surrogate consular archives up to a point. The Kanagawa consular office was unaffected by the great fire in 1866 in Yokohama (though the records of the Chamber of Commerce were destroyed). Remarkably, and as a sign of how little regular statistical contact officials actually maintained with the Custom Houses, the consul became aware of the destruction of all of the records of the Yokohama Custom House only when he applied on 26 March 1867 for trade figures for 1866 (Consul to minister, Tokyo, Kanagawa, 3 April 1867, FO 262/133, f.75).

The incoming correspondence includes the draft annual reports, which appear with very minor change in the published BPP. There is however surprisingly little reference to statistical issues in the incoming letters, which would suggest that they took up little of the routine time of busy officers, and would also explain their unease, faced with a demanding annual chore, in handling statistical matters and at times for their very testy comment.

The only true early consular archives prior to 1923 (i.e. archives maintained at a consular station) are those of Nagasaki, which are extensive though not complete for the early decades but fuller in these years than for later times. Documents of particular interest are two copy letter books, one containing the text of letters in Dutch, almost all to the “governor” of Nagasaki for June 1859–December 1862 (TNA, FO 796/18); the other to local Japanese officials 3 Jan. 1863–29 Oct. 1866 (TNA, 796/25). In addition to letter books for copies of outward letters from Nagasaki, there survive in broken fashion volumes of loose letters, variously incoming or outgoing, some in draft form (i.e. prior to their translation into Japanese) and some incoming letters in Japanese. In the present context, given the tensions displayed in the reports in BPP over access to or adequacy of statistical information, the most striking point is the high handedness of the language often employed by consular officials.

The Nagasaki records are a remarkable illustration of a consular station at work. However,

reference to trade is sparse, arising from individual cases concerning customs duties (an issue lacking in the surrogate FO 262 series). On infrequent occasions, the extraterritorial issue involved customs or trade regulations in regard, for example, to breaking bulk outside the official opening hours of the Custom House. Hakodate, in particular, was a place of little trade (with accounts in the early years of often uncooperative or allegedly irregular behavior by Custom House officials often taking pride of place in reporting). However, it had an importance as whalers sailed in northern waters, and it was also a useful watching post for observing Russian intentions in the region. A palpable fear of Russian encroachment can be seen in the letters to the legation in Edo, a subject of even more concern to the Japanese themselves, of course. In 1862, in the course of a long letter on the Russian problem, the British consul observed that “the highest Japanese functionary trembles before the lowest Russian adorned with a white or yellow cap-band” (TNA, FO 262/44, fl.21–34 Enslie to legation, 2 Sept. 1862). A general impression from the records is of a well organized and efficient consular service maintaining close ties with the legation.

## Appendix 2: Return of Osaka Coastal Trade for 1866

The Osaka *bugyō* told a British official in 1867 that some figures for coastal imports, though they did not cover all commodities, existed, and he duly provided details of 20 commodities.<sup>160</sup> They are reproduced here as they have not been adverted to in modern works.

### Coastal Imports in Osaka, 1866

Rice	311,258 koku
Other cereals and vegetables	64,535 koku
Oil	23,932 koku (sic)
Soy	11,000 tubs
Salt	916,270 bags
Charcoal	1,253,880 bags
Wood	921,540 bundles
Seaweed	24,900 bundles
Dried bonito	63,560 <i>kuamme</i> (3,972 piculs)
Teas	104,470 <i>kuamme</i> (5,779 piculs)
Paper	134,00 bundles
Floss silk	22,500 bundles
Vegetable wax	47,290 packages
Raw silk	3,300 <i>kuamme</i> (206 piculs)
Lead (Japanese)	800 piculs
Iron	31,500 bundles
Leaf tobacco	9,250 bundles

Cut tobacco	13,760 boxes
Mats (fine)	15,000 packages
Mats (rough)	105,000 packages

(Kuamme: kanme)

The small number of items—a mere 20—shows how incomplete the return was. While the governor had noted some omissions (such as sake, a major item in coastal trade), what is more striking is the total absence of cloth. The figure for rice is higher than in earlier trade returns, suggesting that it included *kuramai* 蔵米 (rice on domain or daimyo account, normally not included in trade figures of Osaka). The relatively modest total in the wake of the bad harvest of 1865, which would depress the overall level of trade in rice in 1866, is consistent also with the low number of ships entering the port in the course of 1866.

### Appendix 3: Problems in BPP Figures for Nagasaki and Yokohama, 1863

Up to mid decade a recurrence of problems in one or other port was a feature of statistical reporting, but in two cases, Nagasaki (1862 and more particularly 1863) and Yokohama (1863), figures present an uncommon degree of confusion.

#### A. Nagasaki Trade Figures for 1863

##### Nagasaki Trade in 1863

	BPP* (in dollars)	Paske-Smith† (in dollars)	Japanese return ° (in taels)
exports	1,388,071 (925,381)	925,000	3,470,182
imports	1,421,885 (947,458)	602,000	3,552,967

\* Figures from BPP, vol. 4, p. 121; figures in parentheses from BPP, vol. 4, pp. 205–206 (adding totals for British and foreign vessels). Figures of 1,388,071 dollars and 1,421,885 dollars, differing from those given in his table on p. 303 are also cited elsewhere by Paske-Smith 1930, p. 206.

† Table from Paske-Smith 1930, Appendix 1, p. 303.

° Returns in taels, from BPP, vol. 4, pp. 143–47; conversion of taels to dollars at variable rates.

Import figures of 947,458 dollars and export figures of 925,381 and the variant export figure of 1,388,071 dollars and import figure of 1,421,885 dollars seem to be a consequence of confusion caused by different rates of conversion from taels to dollars. Returns in taels by definition originated with Japanese officials rather than in a consular attempt at counting. The conversion rate of 5.85 taels to the dollar given by Paske-Smith for the trade of 1863 is erroneous. It is suspiciously close to the fixed rate of 5.90 taels that was used for valuing invoices in gold currencies (while the market rate had sunk to 3.370 in 1863). The tael was an archaic measure used in the international trade of east Asia, and was going out of fashion in Nagasaki. In 1865, and for some years thereafter, figures in Nagasaki were valued in ichibus, an actual coin and not an archaic method of valuing in a notional money of account. The amounts in ichibus were then converted into dollars at the market rate. As late as February 1863, the British consuls did not have independent knowledge of the conversion rate of the tael.<sup>161</sup> In the case of

the calculation for 1862, the presence of both taels and dollars had already led to confusion. In addition to a fixed rate for converting imports from gold currency countries, both fluctuating market rates and an accelerating fall in the market value of silver were possible sources of confusion. If conversion is done at a high rate of 5.90 taels to the dollar, imports of 3,552,967 taels in 1863 became 602,198 dollars. (This is by coincidence, or otherwise, Paske-Smith's low figure for imports.) A total of 925,381 dollars for exports, if a rendering of a count of 3,470,182 in taels, would suggest a tael exchange of 3.75, a figure quoted in 1865 as an average value of the tael in 1863 and 1864.<sup>162</sup> A total of 1,388,071 dollars, on the other hand, seems unduly high as it implies for 1863 a rate of less than 3 taels to the dollar. Thus, the likely figures are 925,381 dollars for exports (a figure close to that in Paske-Smith's table), and 947,458 for imports. The higher figure of 1,421,885 dollars given in one BPP version requires a very low tael rate. The figures of 925,381 dollars for exports and of 947,458 for imports given in a table for the years 1863–65 for all three open ports would seem to confirm the validity of these figures, even though they may have been incorporated, perhaps with the wisdom of hindsight, into a report from Kanagawa on 28 March 1866.<sup>163</sup>

#### B. Yokohama Trade Figures for 1863

The figures for Yokohama in 1863 presented Ishii with more problems, and he spent more time on them than on figures for any other year. Finally, he opted for a high total of 10,554,012 dollars for exports rather than the alternative of only half that figure; and for imports he opted for 3,244,584 dollars.<sup>164</sup> In making this choice, he disregarded without discussion a higher figure for imports of 3,474,749 dollars that had appeared in his own Table no. 3.<sup>165</sup> Here the appearance of confusion is much greater than the reality. The problem lay in the fact that for that year officials presented both the "declared values," that is the figures as computed by the Custom House, and adjusted imports on criteria of their own (adjusted to account for information on prices, for example). Defective valuations were the most easily identified deficiency in the statistics. Silk was the dominant item in the exports of Yokohama; even in terms of declared values, it accounted for 4,127,340 dollars, or 80 percent of total exports of 5,134,184 dollars. In the declared or official values, silk was valued at 210 dollars per picul; in the appendix to the Kanagawa consul's report it was valued at 450 dollars apiece. Nowhere is it stated that the figures had been revalued. Figures in dollars tables were declared to be at "the valuations accepted thereon at the Custom House," but there was no indication in the text that figures in sterling arose from a conversion into sterling of data in the appendix for imports at revised valuations. Figures for exports also were adjusted.

The table below sets out the various estimates for the confusing data for this year.

#### Value of Yokohama Trade in 1863 in BPP Reports\*

	Consul's report		Alternative estimate (appendix of consul's report)	
	Dollars	Sterling	Dollars	(Sterling)*
Exports	5,134,184	2,638,503	10,554,022	(2,638,505)
Imports	1,595,170	811,146	3,244,589	(811.147)

\*BPP, vol. 4, pp. 87–101, especially pp. 87, 94–95. This table is obviously drawn from the same source as Paske-Smith's account (Paske-Smith 1930, pp. 205–206).

\*Actual sterling totals are not given by the Kanagawa consul in the appendix; they are as cited in the report, resulting from conversion of dollar totals at 5s.0d. to the dollar.

The tabular presentation above identifies the cause of the apparent confusion in the BPP. The dollar and sterling totals in the consul's report, viewed in the context of the report itself, would imply a conversion rate of 1.9 in the case of both imports and exports. This cannot be the base of conversion, as the consul was aware of a conversion rate of 5s.0d. to the dollar, and quoted it several times. In other words, the figures are independent of each other. In the case of the alternative estimate, the figures in the appendix to the report were given in a series of separate tables for ships of various nations that were not summed up into grand totals for exports and imports. If added up and converted at 5s.0d. to the dollar, the dollar total yields the sterling figures which appear in the consul's report. Thus, while dollar totals in the report are the "declared values" at the Custom House, the sterling totals in the consul's report are not conversions of the Custom House declared values, but conversions into sterling of higher gross totals in dollars created by the consular revaluation process. In the body of the consular report (if not in the appendix), those totals seems to be identified quite erroneously as sterling equivalents of the declared values. In other words, there is neither a serious error in the figures, nor a gross confusion by the consul, but an apparent rather than real contradiction caused by the lack of an unambiguous statement of the different basis on which the figures in the appendix were compiled.<sup>166</sup> The lack of an actual gross total for component detail in the tables in the appendix made it easier not to advert to the error.

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## REFERENCES

### Abbreviations

BPP: British Parliamentary Papers; NDL: National Diet Library; YKS: Yokohama Kaikō Shiryōkan

Alcock 1863

Rutherford Alcock. *The Capital of the Tycoon: a Narrative of Three Years Residence in Japan*, 2 vols. Longman, Roberts, and Green, 1863.

Baba and Tatemoto 1968

Masao Baba and Masahiro Tatemoto. "Foreign Trade and Economic Growth in Japan: 1858–1937." In *Economic Growth: The Japanese Experience since the Meiji Era*, ed. Lawrence Klein and Kazushi Okawa. Yale Economic Growth Center, 1968.

BPP

British Parliamentary Papers. *Area studies, Parliamentary Papers, Japan*, ed. W. G. Beasley, 10 vols. Irish University Press, 1971–1972.

*Dai Nihon gaikoku bōeki nenpyō* 1990

*Dai Nihon gaikoku bōeki nenpyō: Meiji* 15, 16, 17 大日本外国貿易年表：明治 15, 16, 17. Ōkurashō, 1882–1883, 1884; repr. Tōyō Shorin, 1990.

Cullen 2006

Louis M. Cullen. "Tokugawa Population: The Archival Issues." *Japan Review* 18(2006).



Cullen 2009

———. “Statistics of Tokugawa Coastal Trade and Bakumatsu and Early Meiji Foreign Trade, Part 1: Coastal Trade in Tokugawa Times,” *Japan Review* 21(2009).

Foreign Trade Returns, 1866–72, 1866–73 KBS

Kokuritsu Kōbunshokan 国立公文書館 National archives, Tokyo. 187–222. a. *Kakkō yushutsu buppin hyō* 1866–1873 各港輸出物品表 woodblock print; b. *Kakkō yushutsu buppin kinryō daika hyō* 1866–1872 各港輸出物品斤量代価表 manuscript.

Foreign Trade Returns, 1870–72 KBS

Kokuritsu Kōbunshokan, Returns of foreign trade. 1870–72 (187–247 i, returns, second half of 1870; 187–247 ii, returns, two half years 1871; 187–247 iii, returns 1872: for full titles see below under Foreign Trade Returns, 1866–1880 YKS).

Foreign Trade Returns 1866–1877, NDL

National Diet Library YD-212 (microfilm), Parliamentary documents and official papers room. reel 1 (filmed 1964), Exports 1866–72, 1866–73, Exports and imports, 1870 (in two parts), 1871 (in two parts), 1872; Reel 2 (filmed 1963), Exports and imports, 1873, 1874, 1875 (in two parts for each year), year ended June 1876, half year ended Dec. 1876, year ended June 1877.

Foreign Trade Returns, 1866–1880, YKS

Yokohama kaikō shiryōkan Yokohama archives of history 1866–1880 横浜開港資料館 1866–1880 (14 vols of photocopies of returns of foreign trade variously in woodblock printing and movable type). Vol. 1, a. *Kakkō yūshutsu buppinhyō* 1866–1873 各港輸出物品表 (Statistics Bureau of Ōkurashō 1874) woodblock print. b. *Kakkō yūshutsu buppin kinryō daika hyō* 1866–1872 各港輸出物品斤量代価表 manuscript; Vols. 2, 3, *Kakukaikōjō yūshutsunyū buppin daka* 各開港場輸出入物品高 Total exports and imports of every open port, half yearly 1870, 1871; vol. 4, *Kakukaikōjō yūshutsunyū buppin daka hyō* 各開港場輸出入物品高表 Tables of total exports and imports of every open port, year 1872; vol. 5, *Dai Nihon kakkō yūshutsunyū buppin nenpyō* 大日本各港輸出乳物品年表 Yearly table for exports and imports of every port of empire of Japan (first bilingual annual report with original title in English of “Annual return at all the ports of Japan 1873”); vols. 6, 7, 8, *Nihon gaikoku bōeki hannenpyō* 日本外国貿易半年表 Half-yearly tables of Japanese foreign trade, half yearly 1875, 1879, 1880; vol. 9 and 10, bilingual monthly returns 1873; vol. 11, bilingual monthly returns Jan. 1874–May 1876\*; vol. 12, 13, 14, bilingual monthly returns 1877–1880\* (\* above: NDL YD-212 (microfilm reel 2) has variously yearly or half-yearly returns for years 1873–1877).

Frost 1970

Peter Frost. *The Bakumatsu Currency Crisis*. East Asian Research Center, Harvard University Press, 1970.

Howe 1999

Christopher Howe. *The Origins of Japanese Trade Supremacy*. Hurst and Co., 1999.

Imlah 1958

A. H. Imlah. *Economic Elements in the Pax Britannica: Studies in British Foreign Trade in the Nineteenth Century*. Harvard University Press, 1958.

Inoue Kaoru kankei monjo NDL

*Inoue Kaoru kankei monjo* 井上馨関係文書. National Diet Library Kensei Shiryōshitsu 国立国会図書館憲政資料室.

*Inoue Kaoru monjo kankei mokuroku* 1975 NDL

*Inoue Kaoru kankei monjo mokuroku* 井上馨関係文書目録. National Diet Library Kensei Shiryōshitsu, 1975.

Ishii 1944

Ishii Takashi 石井孝. *Bakumatsu bōeki shi no kenkyū* 幕末貿易史の研究. *Nihon rekishi-gaku taikei* 日本歴史学大系 4. Nihon Hyōronsha, 1944.

Itani 1931

Itani Zen'ichi 猪谷善一. "Bakumatsu no shakaikizaiteki igi" 幕末の社会経済的意義. *Shakai keizai shigaku* 社会経済史学 1:1 (1931).

Katsu 1967

Katsu Kaishū 勝海舟. *Kaigun rekishi* 海軍歴史. In *Katsu Kaishū zenshū* 勝海舟全集, vol. 8. Hara Shobō, 1967.

Katsu 1978

———. *Suijinroku* 吹塵録 (1890), part 5. In *Katsu Kaishū zenshū* 10. Keisō Shobō, 1978

Kawai 1895

Kawai Toshiyasu 河合利安. "Bakumatsu no bōekigaku" 幕末の貿易額. *Tōkeigaku zasshi* 統計学雑誌 109 (1895).

KBS

Kokuritsu Kōbunshokan, See Foreign Trade Returns, 1866–1872, 1866–73 KBS, and 1870–72 KBS.

Matsukata 1899

Masayoshi Matsukata. *Report on the Adoption of the Gold Standard in Japan*. Government Press, 1899.

*Matsukata Masayoshi monjo mokuroku* 1954 NDL

*Matsukata Masayoshi monjo mokuroku* 松方正義文書目録. National Diet Library Kensei Shiryōshitsu, 1954.

*Matsukata Masayoshi kankei monjo* 1981

*Matsukata Masayoshi kankei monjo* 松方正義関係文書, vol. 3. Daitō Bunka Daigaku Tōyōkenkyusho 大東文化大学東洋研究所, 1981

*Matsuo ke monjo mokuroku* NDL

*Matsuo ke monjo mokuroku* 松尾家文書目録. National Diet Library Kensei Shiryōshitsu.

*Meiji zaisei shi* 1971

Meiji Zaisei Shi Hensankai 明治財政史編纂會, ed. *Meiji zaisei shi* 明治財政史, vol. 7. Reprint by Yoshikawa Kōbunkan, 1971. (Orig. pub. 1904.)

*Nagasaki ken shi* 1985

*Nagasaki ken shi: Taigai kōshō hen* 長崎県史：対外交渉編. Ed. Nagasaki ken shi Henshū inkai. Yoshikawa Kōbunkan, 1985.

NDL

National Diet Library, Tokyo. See Foreign trade returns 1866–1877, NDL; see also *Inoue Kaoru kankei monjo*, *Inoue Kaoru kankei monjo mokuroku*, *Matsukata Masayoshi monjo mokuroku*, *Matsuo ke monjo mokuroku*, *Shōda ke monjo mokuroku*.

*Nihon bōeki seiran* 1975

Tōyō Keizai Shinpōsha 東洋経済新報社, ed. *Nihon bōeki seiran* 日本貿易精覧. Tōyō Keizai Shinpōsha, 1975 (first ed. 1935).

Nishikawa, Odaka, and Saitō 1996

Nishikawa Shunsaku 西川俊作, Odaka Kōnosuke 尾高煌之助, and Saitō Osamu 齋藤修, eds. *Nihon keizai no nihyaku nen* 日本経済の200年. Nihon Hyōronsha, 1996

Paske-Smith 1968

M. Paske-Smith. *Western Barbarians in Japan and Formosa in Tokugawa Days, 1603–1868* (Orig. pub. 1930). Paragon Book Reprint Corp., 1968.

Ravina 1999

Mark Ravina. *Land and Lordship in Early Modern Japan*. Stanford University Press, 1999.

*Shōda ke monjo mokuroku* NDL

*Shōda ke monjo mokuroku* 勝田家文書目録. National Diet Library Kensei Shiryōshitsu.

Sugiyama 1988

Shinya Sugiyama. *Japan's Industrialisation in the World Economy, 1859–1899: Export Trade and Overseas Competition*. Athlone Press, 1988.

Tatemoto 1968

Masahiro Tatemoto. “The Correction of Official Import Statistics, 1874–1887, for the Depreciation of Silver,” in Masao Baba and Masahiro Tatemoto, “Foreign Trade and Economic Growth in Japan: 1858–1937.” In *Economic growth: the Japanese Experience since the Meiji Era*, ed. Lawrence Klein and Kazushi Okawa. Economic Growth Centre, 1968.

TNA

The National Archives, Kew, London. FO 262, legation Edo/Tokyo: correspondence with London and consulates, 61 volumes 1859–1875: Nagasaki, Kanagawa, Hyōgo/Osaka/Kōbe, Hakodate, Niigata; FO 796, consulate Nagasaki, 56 volumes 1859–1873: letter books, loose letters.

Umemura and Yamamoto 1989

Umemura Mataji 梅村又次 and Yamamoto Yūzo 山本有造. *Kaikō to ishin* 開港と維新. Vol. 3 of *Nihon keizai shi* 日本経済史. Iwanami Shoten, 1989

Yamaguchi 1968

Yamaguchi Kazuo 山口和雄. *Nihon keizai shi* 日本経済史. Vol. 12 of *Keizaigaku zenshū* 経済学全集. Chikuma Shobō, 1968.

Yamaguchi 1990

———. “Dai Nihon gaikoku bōeki nenpyō ni tsuite” 大日本外国貿易年表について. In *Dai Nihon gaikoku bōeki nenpyō, Meiji 15, 16, 17, comp.* Ōkurashō. Repr. Tōyō Shorin, 1990.

Yamaguchi and Ōuchi 1968

Yamaguchi Kazuo 山口和雄 and Ōuchi Tsutomu 大内力. *Meiji shonen no bōeki tōkei* 明治初年の貿易統計. Tōkyō Daigaku Shuppankai, 1968.

Yamazawa and Yamamoto 1979

Yamazawa Ippei 山澤逸平 and Yamamoto Yūzō 山本有造. “Bōeki to kokusai shūshi” 貿易と国際収支. *Chōki keizai tōkei* 長期経済統計 14, Tōyō Keizai Shinpōsha, 1979.

Yasuoka 1990

———. “Zenkoku shijō no keizai henka” 全国市場の経済変化. In *Shinshū Ōsaka shi shi* 新修大阪市史, vol. 4. Ōsaka shi Shi Hensan Inkai, 1990.

YKS

Yokohama Kaikō Shiryōkan. See Foreign trade returns, 1866–1880, YKS

*Yokohama shi shi* 1959

*Yokohama shi shi* 横浜市史, vol. 2. Yokohama shi, 1959.

*Yokohama shi shi: shiryō* 1962

“Nihon bōeki tōkei 1868–1945” 日本貿易統計1868–1945. *Yokohama shi shi: Shiryō ben*, vol. 2, 横浜市史：資料編二. Yokohama shi, 1962.

*Yokohama shi shi* 1963

*Yokohama shi shi*, vol. 3, pt. 2. Yokohama shi, 1963.

## NOTES

- 1 BPP, vol. 1, p. 194, Alcock, Edo, 6 March 1860. A paucity of interpreters was also noted as adding to problems (BPP, vol. 1, p. 165, Alcock).
- 2 BPP, vol. 1, p. 165, Edo, 21 Nov. 1859.
- 3 TNA, FO 262/230, f.103, Gower, Hyogo, 29 Feb. 1872.
- 4 BPP, vol. 4, p. 29.
- 5 BPP, vol. 4, p. 21.
- 6 For an interesting summary of the situation, see Paske-Smith 1930, p. 203.
- 7 BPP, vol. 4, pp. 19, 20. The Nagasaki exports for 1859 of 870,436 dollars were not cited by Ishii. (Ishii 1944). There is also an estimate for exports from Nagasaki for the first half of the year. As the port of Nagasaki was open only from July 1859, this figure is simply a return from the Shanghai Custom House for the external trade conducted by the Chinese from Japan for the period.
- 8 BPP, vol. 4, pp. 29–31. See also Paske-Smith 1930, p. 205.
- 9 BPP, vol. 1, p. 194, Alcock, 6 March, 1860. In a letter of 26 April, he described it more ambiguously as the trade of “less than 12 months” (BPP, vol. 4, p. 18). Alcock seems to have drawn this conclusion primarily on the basis of the evidence he had for Nagasaki.
- 10 BPP, vol. 4, 26 April 1860, pp. 20–21. The total was 584,262 dollars, consisting of 461,386 dollars to Britain but including some coastal trade, and 122,876 dollars to foreign countries. These figures were not cited by Ishii in his classic study (Ishii 1944), no doubt because of their nature as external estimates not generated in Japan itself.
- 11 BPP, vol. 4, pp. 23–29, Consul Vyse, Kanagawa, undated report for half year ending 31 Dec. 1860.
- 12 For an amusing but patronizing and possibly apocryphal story of the entry at a Custom House, apparently in Nagasaki, of two tigers, see Alcock 1863, vol. 2, pp. 385–86.
- 13 Ishii 1944.
- 14 Paske-Smith 1930, p. 303. Montague Bentley Talbot Paske-Smith was His Britannic Majesty’s Vice-Consul in Osaka 1920–1925, Consul in Nagasaki 1926–1930, and Consul in Dairen 1931. Some of his data differ from those in the BPP. While widely quoted, their sources have never been analyzed. See Appendix 1, The Paske-Smith figures for exports and imports in the open ports.
- 15 Sugiyama 1988, p. 47.
- 16 Baba and Tatemoto 1968, p. 164
- 17 Kawai 1895, p. 4. His figures were later used extensively by Itani Zen’ichi.
- 18 BPP were available in later bound volumes and, in modern times, papers for Japan have been brought together in the Irish University Press series of 10 volumes. Parliamentary papers were first published and circulated as individual documents, and at the time it was to these that Japanese and others alike had access.
- 19 Ishii 1944, p. 38.
- 20 From an English language text entitled “Foreign trade of Japan: a statistical survey,” and separately paginated (*Nihon bōeki seiran*, 1935, p. 16). This table is missing from what is otherwise a broadly similar Japanese-language version preceding it in the same volume.
- 21 Ishii 1944, exercising due discrimination, adopted the latter figure in his Table no. 5.
- 22 Paske-Smith did not give figures for Hakodate, hence his totals, which are for Kanagawa and Nagasaki only, cannot be compared with totals for all three open ports. Paske-Smith 1930, p. 303.

23 Ibid.

24 There is a still higher figure of 3,701,084 dollars in *Yokohama shi shi* 1959, p. 548.

25 Ishii 1944, pp. 50–51.

26 *Yokohama shi shi* 1959, p.548.

27 As quoted in Ishii 1944, p.38.

28 BPP, vol. 1, pp. 285–87, Vyse, 19 Feb. 1861. Vyse converted the totals into sterling. These are the only figures he cited: £198,000 for imports and £824,000 dollars for exports. As printed, the report has a footnote reference to an “annexed table and returns” which had not yet been received in London. There is a slightly edited and undated copy of this report in BPP, vol. 4, pp. 31–32. Though contrary to treaty intent, business was conducted almost from the outset at Yokohama (which British officials at first claimed was a new Deshima 出島). The consular station itself, reflecting British opposition to the Japanese decision, continued for some considerable time to describe its reports as coming from the consular station at Kanagawa.

29 The alarming magnitude of the consul’s “approximate estimate” for 1862 of 2.5 million dollars for imports and 3 million dollars for exports was simply caused by the consul in his confusion giving too low a value in taels to the dollar; his conversion inflated the dollar sum (Nagasaki consul, 18 February 1863, BPP, vol. 4, pp. 60–67, Winchester). The consul, not conversant with the going exchange rates (BPP, vol. 4, p. 63), quoted an improbable exchange rate of 1.80 taels to the dollar for the export trade on the authority of the Portuguese consul. Winchester took the dollar for imports to be equal to 1 ½ taels (p. 61); on what authority Winchester relied, we do not know. To add to the confusion, elsewhere in the report the British consul quoted 3.50 to 4.00 taels as the valuation of the dollar on the open market (p. 61). He also gave a rate of 5.50 taels to the dollar for what seems the fixed rate employed by the Custom House for converting gold invoices into dollars (p. 61). This was a rate both below the actual rate of 5.90 at the time and the conversion rate of 5.85 tael to the dollar in later years. A rate of 5.90 taels (or 5.85) would appear to be inapplicable to exports at large (as they were in silver prices), and also to imports from silver currency areas. For these areas of trade, Custom House valuations of the dollar were probably at, or close to, market valuations. Conversion of the gross total of trade in taels to dollars on the basis of 5.85 or 5.90 taels to the dollar (a rate much higher than an open market rate around 3.50 taels), would by definition result in an unduly deflated gross total in dollars. In addition, as the gross total consisted of imports in silver currency and of a gold currency component already deflated by a high official rate for the dollar, a gross total converted at a high rate of 5.90 taels would include a component in effect deflated twice over. The consular confusion over taels and dollars, which was not spotted in Kawai’s study, was recognized by Ishii, who used a rate of 3.75 taels to the dollar to calculate total exports of 800,000 dollars and total imports of 667,000 dollars.

30 For Nagasaki, Alcock’s figures were exports of 1,000,317 dollars (£203,000 sterling) and imports of 669,261 dollars (£140,000 sterling). (Alcock, vol. 2, p. 387.) Alcock’s figures were higher than Paske-Smith’s, but the two versions are not grossly out of line. Alcock’s data for 1861 seem the more solid. Alcock’s figures for Yokohama appear in Alcock 1863, vol. 2, p. 384. His figures for 1861 were £558,948 sterling for exports and £307,981 sterling for imports. The figures were derived apparently from dollar totals converted at 4s.2d. to the dollar. His figures for 1860 (exports of £823,812 sterling and imports of £197,023 sterling) are identical to Vyse’s (see note 28), if allowance is made for some rounding by Vyse. The pagination of Alcock’s book, as given in Ishii, is from the American edition.

31 His sources are identified in note 3, referring to p. 43 as *Shokanjō sono hoka jūkomi* 諸勘定其外絨込.

32 The source is identified in foot note no. 4, referring to page 43, as *Kakkoku shokandome man'en gannen* 各国書翰留万延元年.

33 Referring to p. 44 of the text, footnote 6 gives as its authority Isen sho kakitsuke 異船諸書付, and footnote 9 (p. 58) gives for authority Nezu Masashi 瀬津正志, “Bunkiyū gannen Rokan Posadoniggu no Tsushima senkyo ni tsuite” 文久元年露艦ポサドニグの対馬占拠に就いて, *Hō to keizai* 法と経済 2:2.

34 Footnote 18 (p. 58) referring to text on page 46 is based on “Burenwarudo hōkoku” ブレンワ

ルド報告, cited in a paper by Itani (Itani 1931). The author and work are identified from Ishii, p. 42, footnote 8.

35 While Paske-Smith's table has rounded figures for 1859 and 1860, it entirely lacks 1862 data for Nagasaki. It also has the curiosity of returns for Yokohama for 1866, which do not feature in official consular reports. Almost certainly these figures are an aggregation of monthly figures for the first ten months of 1866, although it is an open question whether the monthly returns existed in the Custom House at the time, or came into consular possession at a later date. Strikingly, Paske-Smith refers to a source other than the printed reports in the parliamentary papers, though for 1863 his evidence seems to suggest that he had access to the printed report on the trade of that year. On Paske-Smith's sources, see Appendix 1: The Paske-Smith figures for exports and imports in the open ports.

36 BPP, vol. 4, p. 142, 3 Jan. 1865, Gower, forwarding return for 1863. Gower seems to have had some difficulty with statistics at large, and his inadequacy became more apparent in his service in Osaka in the early 1870s.

37 BPP, vol. 4, pp. 48–49, 31 Jan. 1863. Ishii's text appears to give Alcock's figures in taels for the year, with the dollar total coming from a conversion of the tael total into dollars. However, it is clear that the consular report was Ishii's source, though he omits to mention the BPP. A retrospective table for 1860–1864 appears in the report for 1864, dated 24 March 1865 (BPP, vol. 4, p. 105).

38 BPP, vol. 4, pp. 94–95, March 1864.

39 The 1863 report does not seem to have been formally presented to London, and was not printed in BPP. The figures for 1863 can be gleaned only obliquely: in retrospect from figures in taels for that year which are given alongside the figures for 1864 in the 1864 report made early in the following year, and in dollars in tables comparing the trade of the three open ports. These numbers appear in Kanagawa reports on 21 April 1865 and 28 April 1866 (See appendix B). The report for Nagasaki for 1865, dated 15 Jan. 1866 (BPP, vol. 4, p. 186) referred to a double report for 1863 and 1864. This was not literally the case; rather there was an interval of fifteen days between the two reports (3 Jan. 1865 and 18 Jan. 1865). The temporal separation of the reports explains why the very late report for 1863 was in effect suppressed, and only the report for 1864 entered into the official domain.

40 BPP, vol. 4, pp. 37–38, 41–44. This was picked up by Kawai Toshiyasu and thence entered by Ishii in his Table no. 5. No figure is given for imports for 1862, which could be either an omission or simply a case of the minute quantity of imports not being considered worth reporting.

41 BPP, vol. 4, pp. 77–86.

42 BPP, vol. 4, pp. 153–168, 1 Jan. 1865; BPP, vol. 4, pp. 174–84, 1 Jan. 1866.

43 Cullen 2009, pp. 192, 210.

44 BPP, vol. 4, p. 494–500, Parkes, Edo, 31 March 1870. The report included not only totals of foreign trade, but also the amount of trade in foreign goods between Japanese ports. The report observed (p. 494) that, as some of the foreign trade was intended for transshipment, an addition of the data on foreign trade and local trade would entail double counting. The following report for 1870 appeared under the date of 21 April 1871. BPP, vol. 4, pp. 637–42.

45 Hakodate exports for 1863 are given variously as 269,050 dollars (BPP, vol. 4, p. 80); 266,134 (BPP, vol. 4, p. 167); 167,025 (BPP, vol. 4, pp. 205–206); and 148,712 (BPP, vol. 4, p. 121). There are Nagasaki exports and imports for 1864 of 1,159,892 dollars and 1,316,897 dollars in BPP, vol. 4, p. 188, and exports of 1,739,838 dollars and imports of 975,435 dollars for the same year in BPP, vol. 4, p. 121.

46 Ishii opted for the Paske-Smith figure for imports.

47 *Yokohama shi shi*, 1959, p. 548.

48 Foreign trade returns, 1866–1880 YKS, vol. 9, Jan. 1873.

49 *Yokohama shi shi: Shiryō hen*, 1962, *Hanrei*.

50 Significantly or otherwise, perhaps because the compiler detected the confusion in the report on 1863 and sought to avoid its messy implications, a retrospective table of exports from Yokohama for 1860–1872 “for such of the preceding years as the consulate records furnish me with” gave no data for 1863. (BPP, vol. 5, p. 141, 31 March 1873.) Consular compilers of figures who scrupulously based

retrospective figures on declared values alone also omitted 1863 from all subsequent runs of trade figures.

51 Sugiyama 1988, p. 48.

52 According to BPP, vol. 4, p. 145, the rate was 5.85 taels in 1863.

53 Frost 1970, p. 31.

54 See BPP, vol. 4, p. 186. Ishii converted the tael on the basis of 3.75 taels to the dollar, a rate quoted in the BPP as the average for 1863–1864, as against conversion in consular reports into dollars at a rate of 5.85 taels to the dollar. While this latter conversion rate is almost identical to that of gold invoices followed by the Custom Houses, it would appear to be inapplicable to exports or to imports for silver currency areas. For these areas of trade, Custom House valuations of the dollar were probably at, or close to, market valuations, and a dollar rating of 5.85 or 5.90 taels would have the result of further deflating totals in dollars, which were already deflated in Custom House figures based on gold currency invoices. Following a decision in 1865 to give prices in actual currency, totals for 1865 and 1866 were given in ichibus, the silver coin most widely available in Nagasaki, instead of taels at the rate that had prevailed in 1859–1860.

55 BPP, vol. 4, pp. 60–67, Winchester, 18 Feb. 1863.

56 BPP, vol. 4, p. 73, Porter, 7 Jan. 1864; pp. 175–76, Vyse, 1 Jan. 1866.

57 BPP, vol. 5, p. 141, 31 March 1873.

58 BPP, vol. 4, p. 240, Consul Myburgh, Kanagawa, 3 April 1867. Some accounts using figures of non consular origin give figures for 1866 (for an instance, see *Yokohama shi shi*, 1959, p. 548), which may actually be for the first ten months of the year (as remarked above). As I observed in Part 1 of this article (*Japan Review* 21), British reports identified the *bugyō*, or magistrate, as “governor.”

59 BPP, vol. 4, p. 326, Consul Fletcher to Parkes, Kanagawa, 31 May 1868.

60 BPP, vol. 4, p. 63, Winchester.

61 See, for example, the case of adjustments to the price of tea in Nagasaki exports in 1860 (Paske-Smith, p. 204).

62 BPP, vol. 6, pp. 676–77, Report for Hyōgo/Osaka for 1880.

63 BPP, vol. 7, p. 101, 31 July 1882.

64 Sugiyama 1988, p. 45.

65 Osaka preceded Kobe 神戸 as the early consular station. From the start, the shallow bar at the mouth of the Yodo 淀 river made it impossible for larger Western vessels to enter, and Hyōgo, with deep water (though no shelter from south east winds), became the center of virtually all the trade. This prompted the government quickly to abandon Osaka in favor of Hyōgo as the harbor for foreign trade. The foreign settlement of Hyōgo grew, and by the end of 1870, as a result of the pace of house building, the two separate communities of Hyōgo and Kobe had effectively become one. Only at a much later date, in the wake of great engineering works conducted under the supervision of Dutch engineers, did Osaka itself become an ocean going port. Consular reports until 1885 were presented under the joint name of Hyōgo/Osaka.

66 The advent from January 1873 of statistics very clearly presented in modern printing and bilingual format may be a factor in the emergence of a more positive acceptance of the statistics. Older reports in wood block printing and in somewhat confused presentation are far from easy to follow.

67 BPP, vol. 5, p. 426, Parkes, 30 Aug. 1874.

68 Umemura and Yamamoto 1989, p. 193.

69 Yamaguchi and Ōuchi, 1968, pp. i, ii.

70 BPP, vol. 4, p. 390, 10 March 1870.

71 BPP, vol. 5, p. 77, Consul Robertson, 1 May 1872.

72 BPP, vol. 5, p. 141, Consul Robertson, 31 March 1873.

73 BPP, vol. 5, p. 174, Nagasaki, report for 1872, Consul Flowers, 26 Feb. 1873.

74 Foreign trade returns, 1866–1880 YKS, vol. 9, trade of year 1873.

75 Foreign trade returns, 1866–1880 YKS, vol. 11, monthly returns from Jan. 1874 to May 1876, especially for first months, for which there is more detail than for later months.

76 BPP, vol. 5, p. 344, 30 June 1874.

- 77 BPP, vol. 5, 174, Consul Flowers, 26 Feb. 1873.
- 78 *Meiji zaiseishi* 明治財政史. 1904, pp. 194–98.
- 79 Ibid., pp. 246–323.
- 80 An estimate of purchases of vessels in 1862, 693,000 dollars, is contained in BPP, vol. 4, p. 48, consul Vyse, Kanagawa, 31 Jan. 1863. Incidental reference is common in other years (e.g., BPP, vol. 4, pp. 61, 87, 89, 100, 141, 186–87). On the Japanese side, details of purchases are set out by Katsu Kaishū (1967, pp. 442–54). These later figures have been added to Custom House data in modern accounts to give a more comprehensive return of imports.
- 81 See BPP, vol. 7, p. 109, table of imports 1867–1881.
- 82 Paske-Smith's reference to paying Custom House clerks a monthly fee to supply returns is an oblique reference to this practice (Paske-Smith 1930, p. 203).
- 83 As well as annual figures for years ended December, totals may also have been compiled for years terminating in June, given the existence of half-year figures. At any rate, returns exist for years ended June 1876 and June 1877, and some round totals suggest that such returns were also compiled for other years.
- 84 With a gap for the second half of 1876, monthly returns for 1873–1880 are in Foreign trade returns 1866–1880, vols. 9–14, YKS.
- 85 The monthly figures from 1873 are tabulated in *Nihon bōeki seiran*, 1935, pp. 666–670. The monthly breakdown from the customs department of the Ministry of Finance appeared from 1895 in *Tōyō keizai shinbō* 東洋經濟新報. See the preface to *Nihon bōeki seiran*, 1935, pp. 1–2, and also “Japan's foreign trade, past and future,” p. 41ff. in the same volume. The latter section of 43 pages is preceded by a substantially similar but not identical 48 pages in Japanese under the title “Waga kuni no bōeki” 我が国の貿易. Both sections have a separate pagination from the bilingual main text, entitled “Naichi oyobi Karafuto gaikoku bōeki no bu” 内地及樺太外国貿易の部, which contains the corpus of statistical data.
- 86 The statement is repeated in many of the later months of 1873. Foreign trade returns 1866–1880, vols. 9–10, YKS.
- 87 BPP, vol. 5, p. 439, Parkes, 26 Sept. 1874.
- 88 Modern copies of the series have been made, and are widely available in libraries throughout Japan. Hitotsubashi University 一橋大学, despite its origins as a higher school of commerce of Meiji times, does not have originals for the early years: it has them for later years. The years 1882–4 are reprinted in *Dai Nihon gaikoku bōeki nenpyō: Meiji* 15, 16, 17. They are preceded by a useful introduction by Yamaguchi Tetsuo entitled “Dai Nihon gaikoku bōeki nenpyō ni tsuite” 大日本外国貿易年表について.
- 89 BPP, vol. 7, p. 194, 15 July 1883.
- 90 Useful contemporary retrospective reports are *Dai Nihon gaikoku bōeki taishō hyō* 大日本外国貿易対照表 (1893), and *Nihon gaikoku bōeki yonjūrokunen Taishō hyō: Meiji gannen yori Taishō ninen ni itaru* 日本外国貿易四十六年対照表：明治元年寄至大正二年. On the latter publication, see *Honsho shotōkei shiyōjō no chūi* 本書諸統計使用上の注意, p. 45 (*Nihon bōeki seiran* 1935).
- 91 Yamaguchi and Ōuchi 1968.
- 92 See the tables in Yamaguchi and Ōuchi 1968.
- 93 Foreign trade returns 1866–1880, vol. 1 YKS, two documents, copies of returns in KBS (see bibliography under Foreign trade returns 1866–72, 1866–73) *Kakkō yushutsu buppin kinryō daika hyō* 各港輸出品物斤量代価表 with figures for 1866–1872 and *Kakkō yushutsu buppin hyō* 各港輸出品物表, with figures for 1866–1873. The latter document indicates clearly that it was compiled by the Ministry of Finance's Statistics Bureau (Tōkei ryō 統計寮) in 1874.
- 94 *Yokohama shi shi: Shiryō hen* 1962. The most convenient location for these figures is in foreign trade returns 1866–1880, vols. 1–14 YKS, which contain summary export figures to 1873, and full returns from 1870 to 1880. These are photocopies, and as the pages are sometimes faded, the source from which they are copied is not always easy to identify.
- 95 Foreign trade returns 1866–1877, NDL microfilm. Summary figures from 1866 and full returns



from 1870. *Kanji* and *rōmaji* titles are similar to those in bibliography under Foreign trade returns 1866–1880 YKS.

96 *Matsukata Masayoshi monjo mokuroku* 松方正義文書目録, 1954 NDL, *Matsuo ke monjo mokuroku* 松尾家文書目録 NDL, *Shōda ke monjo mokuroku* 勝田家文書目録. The Shōda collection for a much later period is not relevant in the present context.

97 “Kōshaku Matsukata Masayoshi kyō kanki” 侯爵松方政義卿寬記 in *Matsukata Masayoshi kankei monjo* 松方正義閣関係文書. There is, however, in vol. 3, pp.1–2, a retrospective table of foreign trade for 1868–1885. The microfilms in the National Diet Library contain a few papers relating to Matsukata’s work in customs reform in the 1870s.

98 *Inoue Kaoru kankei monjo* 井上馨関係文書 NDL, , file 691, no. 5, 1870 (Meiji 3). The first six months of the year are in a woodblock printing, styled “Kaku kaikōjō yushutsu buppin daka” 各開港場輸出品高. There is a full calendar of the Inoue deposit in *Inoue Kaoru kankei monjo mokuroku* 1975 NDL.

99 *Yokohama shi shi: Shiryō hen* in 1962 and Yamaguchi and Ōuchi in 1968

100 *Yokohama shi shi: Shiryō hen* in 1962, introduction (unpaginated, fourth page).

101 *Nihon bōeki seiran* 1935, p. 18. The table of exports of coin and bullion in the same volume is accompanied by a note stating that “figures of coin and bullion exported or imported up to 1871 are unavailable.” This seems based on the judgment that, as separate returns for coin and bullion are available from 1872, coin and bullion were included in earlier gross trade figures.

102 BPP, vol. 4, pp. 637–42.

103 Outflow of coin and bullion in 1869 was ten million dollars. Report for Kanagawa, 31 March 1870, BPP, vol. 4, pp. 495–96.

104 BPP, vol. 4, p. 87, March 1864.

105 BPP, vol. 5, p. 23. Osaka/Hyōgo, 29 Feb. 1872.

106 BPP, vol. 5, p. 82, report for Kanagawa, 1 May 1872.

107 BPP, vol. 5, pp. 429, 432, 30 Aug. 1874.

108 Yamaguchi 1990, p. 32.

109 See Sugiyama 1988, p. 48; Nishikawa, Odaka, and Saitō 1996, p. 175.

110 In Nagasaki, the total of foreign residents for various dates between 1862 and 1869 came to a cumulative figure of 2,290. Of these, 1,391 were Chinese. (*Nagasaki ken shi* 1985, p. 848.) Consul Winchester in the early 1860s referred to a total of 1,800 Chinese. On the Chinese in Nagasaki, see also Report on the foreign trade of Nagasaki for 1870, BPP, vol. 4, pp. 586–87. For Kanagawa, Chinese were more than half the total (excluding Americans) in 1874 and 1875. (Reports on the foreign trade of Kanagawa for 1874 and 1875, BPP, vol. 5, pp. 544, 644.) In Hyōgo in 1877, Chinese were slightly less than half the total. (Report on the foreign trade of Hyōgo for 1877, BPP, vol. 6, p. 297.) For counts of Westerners and Chinese in open ports and in Tokyo in 1876, 1880, and 1885, see Report on the foreign trade of Japan for 1885, BPP, vol. 8, p. 55.

111 For currency debasements and depreciation in 1869 in terms of the dollar, see BPP, vol. 4, pp. 442–43, Report from Nagasaki, 31 Jan. 1870. Observations in other years are equally helpful.

112 BPP, vol. 5, p. 37, Nagasaki report for 1871, 31 Jan. 1872.

113 Sugiyama is confused in stating as follows: “During the period 1871–1887, imports from gold-standard countries were converted in terms of Japanese gold yen, while those from silver-standard countries were calculated in terms of Japanese silver yen. Despite the changing difference in value between gold and silver, however, a simple total was made from these figures. It is therefore necessary to convert the figures so that they stand wholly on the basis of silver yen” (Sugiyama 1988, p. 47). Sugiyama seems to suggest here that aggregates of silver yen and gold yen were crudely added together to arrive at the grand total for imports. As the grand totals in Japanese statistical returns were already in silver dollars (including the conversion at fixed rates of sums on gold currency invoices), it would have been impossible for the process to occur as Sugiyama implies. Less than half of imports were expressed originally in silver, and the balance in the values of gold standard countries. The problem of converting gold into silver was in no way an inherent problem of bimetallic currency. The issues

that arose were twofold. The first, in the short term a very real problem, was that while the official parity between gold and silver yen was fixed, silver traded freely in the open ports; recognizing that silver could trade at a discount or premium, Japanese officials converted the Custom House returns, already expressed in dollars, into gold yen at a variable rate. The other problem, a mere bookkeeping one and in the short term minor, was that the gross returns from the Custom Houses were made up for invoices in silver currency of unadjusted figures and, for invoices in gold, of sums converted into silver dollars at a rate fixed in 1871, rather than at the current market exchange rate. If clear recognition of the two conversion processes is made, confusion should not arise. In the process of calculating totals, gold invoice figures were converted into dollar figures at the time of their presentation at the Custom House at the fixed 1871 rate. At a much later date (and in some cases retrospectively for earlier years), officials in Tokyo converted the Custom House dollar figures into gold yen, taking account of variation in the actual exchange rates.

114 Sugiyama 1988, p. 48. Sugiyama regards the problem of comparing dollar and yen totals as arising from the problems of aggregating totals of trade expressed in silver and gold respectively. However, the problem for the Ministry of Finance arose not from that challenge but from the much more difficult task of retrospective calculation for the earlier years, converting the growing medley of mainly depreciated coins. Sugiyama postulates that the exchange rate for dollars for exports in 1869 was 1.12 yen, and for imports, 1.20 yen (Sugiyama 1988, pp. 239–40, n. 44). These ratios do not reflect actual exchange rates, but they are a mathematical consequence of prior conversion. His statement of an annual average exchange rate of 1.24 yen per dollar in 1869 simply adds to the complexity of arguments based on such data. In the case of the bill rate on London, the dollar traded fairly consistently in 1869–1871 at 4s.6d.

115 BPP, vol. 4, p. 260.

116 See “Memorandum on Japanese currency,” Oct. 1893 in BPP, vol. 9, p. 92. This is a very clear report on the Japanese currency over preceding decades.

117 Exports of bullion were exceptionally large in 1874. (BPP, vol. 5, pp. 573–74, report for 1874, 31 Aug. 1875.) Divergences between dollars and gold yen in both exports and imports in 1877 and 1878 were larger than those for 1876 or, for that matter, 1873. Although from 1879 yen and dollar totals for both exports and imports were very close to each other, the sole case of yen and dollar figures being identical was for imports in 1882. Import figures, however, varied slightly from the emerging close general correspondence in 1884.

118 Introduction (unpaginated). The figures are characterized here as “almost the same” (*hobo onaji* ほぼ同じ).

119 Howe 1999, p. 141.

120 From 1878 dollar this dollar, which never proved as popular as the Mexican dollar in the open ports (the problem of securing acceptability for it had been anticipated in its slightly heavier weight at 420 grains than the Mexican dollar), was no longer coined.

121 See “Memorandum on Japanese currency,” Oct. 1893, in BPP, vol. 9, p. 92. Probably the clearest account of the Japanese currency is contained in Matsukata 1899, pp. ii–vii.

122 Except for May 1882, when gold yen were quoted at 95 for 100 dollars, “the average quotation during the rest of the year having been about 92 1/2” is a fair summary of the course of exchange. (Report on Hyōgo and Osaka for 1882, BPP, vol. 7, p. 134, 7 May 1883).

123 Average rates per pound sterling were: 3s.8d. in 1883; 3s.8d. in 1884; 3s.6d. in 1885; 3s.4d. in 1886; 3s.2d. in 1887. A table from 1874 of sterling per yen and dollar per 100 yen is in Yamazawa and Yamamoto 1979, p. 256. Whether these figures were based on a dollar rate or a yen rate is unclear. However, as divergence would have been small between the dollar and the silver yen for most of these years, the exchange would be broadly similar in both cases.

124 BPP, vol. 8, p. 489, 10 June 1890.

125 *Yokohama shi shi* 1963, p. 196.

126 Statistical appendix by Masahiro Tatemoto, “The correction of official import statistics, 1874–1887, for the depreciation of silver” in Baba and Tatemoto 1968, pp. 183–84.

- 127 *Yokohama shi shi* 1963, p. 196.
- 128 Baba and Tatemoto 1968, p. 164 and Sugiyama 1988, pp.46–8.
- 129 Sugiyama's data are based on Paske-Smith's estimates and on a rejection of Ishii's work. As Sugiyama was primarily concerned with estimating the balance of payments, he included additions for the purchase of steamships.
- 130 In regard to earlier figures, undervaluation was not a problem in the figures for 1866–1868. Fixed conversion rates for gold into silver had been abandoned in 1865 in favor of market rates (though they reappeared in 1871). Among the factors that affected the statistics we have for 1869 are these: exchange rates, later retrospective conversions by Ministry of Finance officials, capital movements (which may or may not have been included by the officials who compiled the statistics), and the possibility that interport figures (for trade between treaty ports) were incorporated into figures supposedly for foreign trade only.
- 131 BPP, vol. 5, p. 407, Consul Flowers, 28 March 1874.
- 132 BPP, vol. 6, p. 446, 15 June 1879.
- 133 BPP, vol. 6, p. 705, Kanagawa, 20 June 1881.
- 134 BPP, vol. 4, pp. 356–71.
- 135 BPP, vol. 4, p. 411, 25 Jan. 1870; BPP, vol. 4, p. 551, 28 Jan. 1871.
- 136 BPP, vol. 5, p. 12, Consul Gower, 29 Feb. 1872.
- 137 BPP, vol. 5, p. 120, 4 April 1873.
- 138 BPP, vol. 5, p. 344, 30 June 1874.
- 139 BPP, vol. 5, p. 545, 16 June 1875; BPP, vol. 5, p. 595, 12 June 1876.
- 140 BPP, vol. 5, p. 120, Gower, 4 April 1873.
- 141 BPP, vol. 5, pp. 12, 24, 29 Feb. 1872; BPP, vol. 5, p. 120, 4 April 1873. Gower's poor grasp is very evident in his reports. Though aware of the concept of "disposals" (a fact confirmed in his statement that in his compilations he followed instructions from Tokyo), his failure ever to use the term suggests that he was poorly equipped to make comparisons of Custom House and Chamber of Commerce counts. The treatment of coastal trade to and from other treaty ports also raises difficulties. For 1871 and 1872, Gower added figures for the coastal trade to and from treaty ports to counts from Custom House data of direct foreign trade, but it is not clear how coastal trade was treated in Chamber of Commerce data. (The question of transshipment, discussed above, is relevant in this context.) For the foreign trade of Osaka, the questions of disposals for imports, differences in pricing of commodities, and the treatment of coastal trade make any judgmental comparisons of the merits of Custom House figures highly problematic.
- 142 BPP, vol. 5, p. 545, 16 June 1875; BPP, vol. 5, p. 595, 12 June 1876.
- 143 BPP, vol. 6, p. 85, Hyōgo, 28 June 1877.
- 144 BPP, vol. 5, p. 141, 31 March 1873.
- 145 BPP, vol. 3, p. 118, "Report on the production of tea in Japan," Edo, 11 Oct. 1872, contained in "Report by acting vice-consul Wilkinson on trade of Hyōgo and Osaka."
- 146 BPP, vol. 4, p. 497, report on the trade of Japan for 1869, 31 March 1870. See also BPP, vol. 5, pp. 427–28, report on the trade of Japan for 1873, 30 Aug. 1874. In the return for 1869s, there are errors within the totals in the final column of the table, and the grand total should read 24.3 million, not 24.1 million.
- 147 BPP, vol. 5, p. 572, report on the trade of Japan. Edo, 31 Aug. 1875.
- 148 BPP, vol. 5, p. 438, Parkes, 26 Sept. 1874.
- 149 BPP, vol. 6, p. 580, report on Hyōgo and Osaka, 31 March 1880.
- 150 BPP, vol. 4, p. 156; vol. 7, p. 11.
- 151 BPP, vol. 6, p. 676, Hyōgo, May 1881.
- 152 BPP, vol. 5, p. 224. Report on the present educational system of Japan, 30 Nov. 1873.
- 153 See BPP, vol. 6, p. 14, Report by Mr. Mounsey on the finances of Japan, March 1877.
- 154 BPP, vol. 8, pp. 221–2, 28 Jan. 1888.
- 155 Imlah 1958. Imlah showed that if the value of commodities was recalculated from the

unchanging and increasingly unrealistic valuations applied to exports by earlier statistics, Britain was running not a surplus as was thought, but a large deficit in its balance of trade. This circumstance underlay the huge and unsuspected scale of the balance of payments surplus from “invisibles”, which was beginning to emerge, and to finance a growing outflow on capital.

156 Ibid., p. 44. Declared values existed for exports from 1798. However, they were often overlooked in favor of the unchanging fixed official price totals which continued to be compiled in contemporary analysis of trade. Trade returns in official prices continued to be printed up to 1869.

157 Ibid., p. 44.

158 The earlier omissions in Japanese statistics were exaggerated; figures for official purchases were included. However, they were underestimates and did not include steamships.

159 Cullen 2006, pp. 155–56.

160 BPP, vol. 4, p. 274, report on Osaka/Hyōgo.

161 See notes 29 and 54 1.

162 Paske-Smith 1930, p. 204.

163 BPP, vol. 4, pp. 205–6. The gross returns for exports and imports can be made up by summing the separate tables for trade on British and foreign vessels respectively.

164 Ishii, pp. 46–48.

165 A still higher figure of 3,701,084 is given in *Yokohama shi shi* 1959, p. 548.

166 The omission of figures for this year from later retrospective tables by consular and legation offices is an implicit recognition of the problems created by the 1863 report See also footnote 50.

## 要旨

### 徳川期沿岸交易および幕末・明治初期海外貿易の統計 Part 2: 幕末・明治初期における貿易

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幕末から明治 15 年にいたる日本の貿易に関する資料評価が、この二部構成の論文の主たるテーマである (Part 1 は *Japan Review* 21 に掲載された)。1859 年の開港以降の統計類は、貿易の納品書などを幕府の官吏が直接収集したものである。それ以前は、官吏たちは沿岸交易の組合や問屋などによって提供された数字に依拠していた。閉鎖的な金本位制度における円金貨や円銀貨の平価は、新しい開港場における外国貿易のための標準的な通貨単位であるメキシコ・ドルの市場公開に伴い 1871 年に崩壊した。金が流出し日本の通貨制度が事実上銀本位制となって初めて、ドル (あるいは円銀貨) から円金貨への換算が単一為替レートに近づいた。明治初期の日本の官吏たちは、不安定な通貨制度の中でドルと金の交換に生じる総計の食い違いにもかかわらず、西洋的な統計の構築を試みうまく処理したとも考えられる。徳川初期の沿岸交易に関する記録類は写本としてしか残っていないが、それらは数も少なく、原本と食い違っている場合もある。同じことが 1860 年代の海外貿易においても言える。1869 年以降の新政府による指導下でも、未完成なメモのような僅かな写しが新しい通貨流通量の総額として知られるにすぎない (両に関しては 1869 年以降、円に関しては 1871 年以降)。基本的なドル総額は

個々の税関から中央当局に送られ、その鍵となる基礎データは 1880 年代までのドルと円金貨との換算に基づいたもので、英国議事堂文書（BPP）においてしか知られていない。